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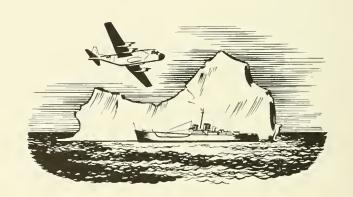


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REPORT No. 19 CG 373-19

OCEANOGRAPHY OF THE GRAND BANKS REGION OF NEWFOUNDLAND IN 1967

Charles W. Morgan





Floyd M. Soule, Capt., USCGR

(Photo. Charlotte Joseph)

Capt. Floyd M. Soule, USCGR (Ret.)

(1901-1968)

Capt. Floyd M. Soule, USCGR (Ret.), the oceanographer and chief scientist for the International Ice Patrol from 1933 through 1963, died at Woods Hole, Mass., on February 15, 1968. He was born July 19, 1901, in Ripon, Wis. and received a B.S. in electrical engineering from George Washington University in 1927. He then entered Government service as a junior physicist with the National Bureau of Standards. In 1918 he became an observer for the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. He joined Carnegie's oceanographic expedition in 1928 and made many of the early observations of the upwelling along the edge of the North Equatorial Current in the Pacific. In 1931 he joined an expedition of the submarine NAUTILUS exploring the waters beneath the Arctic icepack.

In 1933 Floyd Soule was named senior physical oceanographer of the U.S. Coast Guard and as such assumed direct responsibility of all oceanography in support of the International Ice Patrol. During the next 8 years he participated in a number of expeditions to Davis Strait and the Labrador Sea on board the cutters MARION and GENERAL GREENE, and the area east of the Grand Banks was surveyed on an operational basis that yielded dynamic topographic charts within hours of the final observation. He assisted in the development of the shipboard salinity bridge, the beginning of modern oceanographic technology.

With the advent of World War II, Floyd Soule accepted a commission as lieutenant commander in the U.S. Coast Guard Reserve and served as operations officer under Adm. Edward H. Smith on the Greenland Patrol. His knowledge of arctic and subarctic conditions and his "rare ability to translate academic knowledge into action" earned for Commander Soule the Bronze Star from the U.S. Navy.

After the war, he resumed his position as senior civilian physical oceanographer of the Coast Guard, but remained in the U.S. Coast Guard Reserve and was promoted to captain in 1956. The post-war years saw Captain Soule participating in Ice Patrol cruises on board the Coast Guard Cutter EVERGREEN and as a research associate of the Woods Hole Oceanographic Institution.

He retired in 1963 after completing a series of comprehensive ocean current charts of the iceberg areas of the North Atlantic Ocean on which iceberg drift predictions and warnings to shipping are based. He also saw the expansion of the U.S. Coast Guard into other areas of oceanography. On his retirement the U.S. Treasury Department presented him its highest honor, the Albert Gallatin Award.

Captain Soule was a pioneer in the field of oceanography. He was an astute and meticulous scientist. His life work was given to the International Ice Patrol. He made significant scientific achievements but had the even greater satisfaction of seeing his work used for the benefit of man.



Abstract

Three cruises conducted off the Grand Banks of Newfoundland in support of International Ice Patrol in April, May, June, and July of 1967 obtained measurements of temperature and salinity from a salinity/temperature/depth recorder and from Nansen bottle observations. These data were used to draw temperature and salinity profiles across standard sections, and to calculate surface dynamic topography and volume flow through the sections. Dynamic calculations were based on a reference level of 1,000 meters. The cruises occupied standard section A3 a total of 12 times during the ice season and the data indicated that the volume flow of the Labrador Current showed large fluctuations with time, reaching a maximum of 11 sverdrups (106m³sec-1) in early May. The study of iceberg drift and deterioration, which was initiated in 1964, was also continued.

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Oceanography of the Grand Banks Region of Newfoundland in 1967

By Charles W. Morgan, U.S. Coast Guard

INTRODUCTION

Ice Patrol cruises in 1967 continued the practice initiated in 1966, in that three section surveys replaced the old area survey method (Wolford, in press). Calibrating the normal topography is the term for comparing the surface dynamic heights at these three standard sections with the charts of average monthly surface dynamic topography off the Grand Banks prepared by Soule (1964). Figures 1, 3. and 5 show the standard sections occupied. The reason for the change to calibration surveys is that research shows large short-term (1- to 2-week) fluctuations in the volume flow of the Labrador Current, and therefore, calibration type surveys, frequently repeated, give better data for the prediction of iceberg movement in the Grand Banks area, as well as reduce the ship time necessary for routine surveving.

The time required for a calibration survey varies from 4 to 7 days. This compares with about 7 days for the 1965 cruises which used a modified area survey and the pre-1965 cruises which required about 14 days for an area survey.

NARRATIVE

General

The USCGC EVERGREEN (WAGO-295), a 180-foot oceanographic vessel, made three cruises to the Grand Banks in the spring and summer of 1967. Real-time oceanographic support was furnished to Commander, International Ice Patrol on the first two cruises. The third cruise was a post-season research cruise in late July.

The first cruise lasted from 28 March to 1 May 1968. Weather, sea, and ice conditions were bad, and on occasion forced the CGC EVERGREEN to heave to. During 2 to 8 April the CGC EVERGREEN made a calibration survey of standard sections A2, A3, and A4, occupying stations 9849-9893. After completion of the survey the ship reoccupied standard section A3 on 9 April with stations 9884-9890. The period from 10 to 21 April was devoted to iceberg drift studies and to putting in to Saint John's and Argentia, Newfoundland. A time-series study of standard section A3 commenced on 22 April with station 9891. This section was occupied four times during the time-series study. A pair of reference markers, which were later lost in a storm before the fourth time-series occupation, marked the western end of the section. During the reoccupation on 25 April, expendable BT casts were made every mile to define details of temperature structure. The STD shorted out during station 9911 necessitating the use of Nansen casts for the rest of the cruise. On 27 April the CGC EVERGREEN completed station 9916 and set sail for Boston with the first cruise of the season behind her.

After departing Boston on 8 May for the second cruise, the CGC EVERGREEN began a survey of standard section A2, A3, and A4 on 12 May with station 9917. Completing station 9949, the calibration survey was finished on 15 May, and the CGC EVERGREEN commenced an iceberg drift study which lasted until 20 May. A second time-series study was then initiated on standard section A3 with reference markers again placed at the western end of the section. The four occupations of

the section lasted through 24 May and consisted of stations 9954–9988. The STD failed on station 9980. On 30 May another iceberg-drift project began, and this lasted through 4 June when CGC EVERGREEN started the final calibration survey of the season. This calibration survey lasted through 7 June and consisted of stations 9997–10023. On 7 June CGC EVERGREEN set sail for Boston, her operational ice patrol duties finished.

The research cruise was to have consisted of standard sections 1 and 4 and an iceberg-drift project. However, due to a thrust bearing failure, the cruise only occupied standard section 4 from 25–28 July with stations 10024–10040.

Additional Projects

The iceberg drift and deterioration project was continued in the spring of 1967 with studies on four icebergs over time intervals ranging from about 1 to 4 days on 13–14 April, 19–21 April, 16–19 May and 30 May to 4 June. The CGC EVERGREEN tracked the icebergs and deep and shallow drogues with reference to an anchored buoy, photomapped the icebergs, and recorded wind data. These data will be compiled and published in a separate report.

Personnel

The oceanographic work of the first cruise was under direction of the Field Party Chief, LCDR Kenneth M. Palfrey, USCG. Members of the Field Party were Chief Aerographer's Mate Dennis L. Noble, Sonarman First Class Edward S. Olszewski, Jr., Aerographer's Mate First Class David D. Lockhart, Sonarman Second Class Curtis D. Gelder, Sonarman Second Class John G. Colantoni, and Aerographer's Mate Second Class Michael J. Sundquist. The Field Party Chief for the second cruise was Mr. Thomas C. Wolford, Oceanographer. Members of the Field Party were Sonarman First Class William T. O'Brien, Aerographer's Mate Second Class Peter R. San Jule, Aerographer's Mate Third Class Kenneth D. Thoeni, Seaman Aerographer's Mate Raymond M. Patmos, Seaman Aerographer's Mate Danny L. Allen and a student trainee, Mr. Donald P. Massa. The Research Cruise was also under the direction of Mr. Thomas C. Wolford, who was assisted

by Lieutenant James M. Seabrooke, USCG. The Field Party consisted of Senior Chief Sonarman Robert C. Reid, Sonarman Second Class Curtis D. Van Gelder, Sonarman Second Class John G. Colantoni, Yeoman Second Class Dwight E. Olson, and a student trainee, Mr. Richard F. Johnson.

Instrumentation

The primary sampling instrument for the stations occupied during the 1967 cruises was a Bisset-Berman Model 9006N salinity/temperature/depth (STD) recorder. The readings of the STD were corrected by comparison with Nansen bottle samples taken on the STD wire.

The teflon-lined Nansen bottles used were from Ballauf Manufacturing Co. and United Machine Co. The deep sea reversing thermometers were manufactured by Richter and Wiese, GM Manufacturing Co., Kahl Scientific Instrument Corp., and Walter H. Kessler Co., Inc. The bathythermograph system used was the Sippican Corp. expendable BT. A model 6220 Bisset-Berman salinometer determined salinities of water samples taken by Nansen casts.

The following presents a summary of representative statistics on the salinity and temperature instruments:

Instrument	Accuracy	Standard deviation
Reversing ther-	±0.01°C1	±0.011°-±0.016°C°
Salinometers		$\pm 0.005\%$ (Precision)
STD		
Temperature	±0.05°C ⁴	$\pm 0.060^{\circ}$ $-0.099^{\circ}\mathrm{C}^{\scriptscriptstyle{5}}$
Salinity	$\pm 0.03\%$	$\pm 0.018 – 0.037\%^{5}$
Depth	$\pm 0.5 M^4$	

- ¹ Sverdrup et al. (1942).
- ² Kollmeyer et al. (1965).
- 3 Morse (1963).
- 4 U.S. Naval Oceanographic Office (1965).
- ⁵ Unpublished Coast Guard data (1967).

An Alpine Precision Echo Sounder Recorder was used to measure depth to the bottom. A near surface temperature recorder installed on the CGC EVERGREEN was erratic in operation when compared with other means of obtaining sea surface temperature. One of the problems was that the sensor was located in a sea chest.

An AN/GV5-1 ruby laser rangefinder pro-

vided ranges to icebergs for photomapping. The anchored reference buoy used in the iceberg-drift studies was a Geodyne Corp. toroidal fiberglass buoy equipped with a mast and an antenna array, and moored with a bridal, swival, ballast ball, 120 fathoms of 1-inch braided nylon, 1 shot (15 fathoms) of 1/2-inch anchor chain and a 75-pound Danforth anchor. A SST-119X solid state radar transponder manufactured by Motorola Inc. was attached to the reference buoy to facilitate tracking of the iceberg during drift studies. The drogues used in the iceberg-drift project consisted of 28-foot cargo parachutes suspended at 10 or 70 meters depth from a buoy made of innertubes and a bamboo pole with a radar reflector and a light. A similar type of moored buoy acted as a reference marker in some of the iceberg-drift studies, and marked the western end of standard section A3 in the time-series studies.

Loran A and C, visual fixes, celestial fixes, and dead reckoning were the navigational methods used. A bottom current speed-direction recorder manufactured by Cm² Company was used on some of the iceberg-drift studies.

A PDP-8/S digital computer manufactured by the Digital Equipment Corp. was used to process all observed data at sea. The temperature and salinity data at each station were processed by computer using methods discussed by O'Hagen (1964), Morse and O'Hagen (1964) and Kollmeyer (1964) to obtain values of sigma-t and dynamic height anomaly at desired depths. Using the method discussed by Kollmeyer (1967), the volume flow was computed with respect to the 1,000-meter level through solenoids which subdivide a property section into small rectangles. The average solenoidal temperature and salinity were also calculated. When the STD recorder was inoperative, the computer was used to correct reversing thermometers, determine thermometric depth, and calculate salinity from salimometer data.

The data presented in the Tables of Oceanographic Data are from computer printouts returned to the Oceanographic Unit from the National Oceanographic Data Center (NODC), Washington, D.C. Interpolation to standard depths has been done by NODC.

DISCUSSION

In general the physical oceanography of the Grand Banks area during the spring and summer of 1967 appears to follow the pattern of previous years. Figures 2, 4, and 6 are charts of the average dynamic topography of the surface in the area off the Grand Banks for April, May, and June, based on 22 years' observations (Soule, 1964). In these normal charts the steepest dynamic gradients have been smoothed somewhat in the averaging process. The charts indicate that, although the general circulation in the area remains basically the same, there are seasonal fluctuations in the current system. A conspicuous feature of the system, see figure 2, is the Labrador Current which flows southward along the eastern edge of the Grand Banks toward the area of the Tail of the Banks, and then dies out as it continues westward or recurves to the northeast. A dynamic trough lies east of the Labrador Current; between this trough and the high dynamic stand of the meander-like intrusion of the Atlantic Current Water, mixed Atlantic-Labrador Current water flows northeastward. North of the Atlantic Current intrusion there is an eastward flow from further north.

During May, the normal surface topography exhibits an increase in dynamic height on the Banks as shown in figure 4. This is generally related to the arrival of less saline water associated with spring runoff and ice melt. The change in the dynamic height in the trough is less than the change on the Banks, so there is an increase in current speed in May. A second notable change, shown in figure 6, occurs in June when the dynamic trough tends to fill somewhat. This is associated with the recurvature of the water which was off the Banks in May, and it results in a lessening of the flow of the Labrador Current.

Figures 1, 3, and 5 are the charts of dynamic topography for the calibration surveys made in April, May, and June respectively. A comparison of the April survey and the normal topography shows a slight shift of the Labrador Current on the Grand Banks, and an apparent shift of the meander centered at 42° N. 45.5° W. toward the west. The calibration survey for May shows a strong crowding of the

contours toward the dynamic trough and a high dynamic stand on the Banks, inferring a strong Labrador Current with considerable flow over the northeast corner of the Banks west of section A2. The meander at the tail of the Banks appears to have shifted eastward. The semipermanent meander at 42° N. 45.5° W. appears to have shifted west of its normal position. In June the flow of the Labrador Current past section A3 appears about normal. However, at the Tail of the Banks a wide slow westward flow appears to have shifted the meander southward. There are indications that the semipermanent meander at 42° N. 45.5° W. was still some distance west of its normal position.

Temperature and salinity profiles for the standard section on the calibration surveys appear in figures 7 through 9. Differences in the bottom topography of the same sections are due to the navigational difficulty of reoccupying the exact same line of stations. Comparison of the profiles for section A2 shows a slight warming as the season progresses. This was accompanied by a slight freshening at depth and a spreading of less saline water from the Banks eastward. At section A3 the cold core of Labrador Current water was quite small in the first week of April. However, by the middle of May the size of the core, as well as the temperature of the North Atlantic Current water intrusion, had increased considerably. The final survey in June shows a slight decrease in the size of the Labrador Current water core. The salinity profiles at section A3 are characterized by a massive influx of fresher water from the Grand Banks onto the continental slope between April and May. This is generally attributed to spring melt and runoff from Newfoundland and Labrador. By June the water had become more saline again.

Proceeding further south to section A4 profiles, a core of Labrador Current water is noticeable on the edge of the Banks in April and May. By June, however, the profiles show that warming of water on the Grand Banks and mixing with the North Atlantic Current had caused a considerable rise in temperature. The salinity profile shows no well developed minimum core in April; however, in May a well developed core of less than 33.0% is evident.

The profile for June shows that the salinity had again increased.

Figures 10 through 21 show the results of the time-series observations of section A3. The left hand edges of the profiles of temperature, salinity, sigma-t and dynamic height are adjusted to a common base line running between 45–00 N., 49–18 W. and 44–00 N., 49–40 W. Comparison of the figures shows details in the time changes occurring throughout the season. These time-series studies indicate that very rapid changes were occurring in the structures of the water. It is not clear whether the observed changes were due to advection of water from the north, or tidal, or other wave effects.

The expendable bathythermograph profile across the Labrador Current at section A3 is shown in figure 22. An attempt to use this temperature profile with the interpolated salinity profile from stations 9907 to 9911 to compute volume flows gave unrealistic results. Making slight changes in the salinity values, which amounted to introducing turbulence into the salinity profile, and using the expendable bathythermograph data gave volume flows comparable to those computed from temperatures and salinity data from stations 9907 to 9911 alone. This indicates that perhaps spatial turbulence in the temperature and salinity profile tends to compensate in such a manner that the density profile remains fairly smooth.

Figures 23 and 24 show the dynamic topography and the temperature and salinity profiles from the research cruise. This profile extends into the Gulf Stream and shows temperature and salinity maximums of 26.3° C. and 36.72% in the vicinity of stations 10026 and 10027.

The water mass analysis, figure 25, shows the 20 year mean and the 1967 average characteristics of the Labrador Current, mixed, and Atlantic Current water masses. Volume flow, heat transport, salinity transport, average temperature and average salinity were computed for each station-depth solenoid using the methods described by Kollmeyer (1967). The volume flow, average temperature, average salinity, and minimum temperature of the Labrador Current were calculated for each section and are shown on a time-series plot in figures 26 through 29.

The Labrador Current, as differentiated from the Labrador Current Water Mass, is defined in this paper as follows. At section A2 it is the total southerly flow through the eastwest leg and the total easterly flow through the north-south leg. At section A3 it is the total southerly flow west of the dynamic trough, and at section A4 it is the total westerly flow north of the North Atlantic Current. Since the above definitions are simple to use and do not require questionable subjective analysis, their use appears justified.

The total flow of the cold core of the Labrador Current as defined by Kollmeyer (1967) was also determined. The volume flow of this cold core, consisting of water less than 2° C. and 34.3%, is indicated on the time-series plots by a dashed line. On these figures a dashed line is also used to indicate the minimum temperature observed while occupying each section.

Section A3 is the most interesting time series to examine in detail. Because the southward flow of the Labrador Current between the Grand Banks and the dynamic trough is usually quite well defined, it is also the most accurate. The 12 reoccupations of section A3 indicate that the Labrador Current undergoes rather large changes in a matter of days; for example a change in the volume flow of two sverdrups occurred over 2 days around 25 April. The cause of these fluctuations is still open to explanation. Besides the limitations of the geostrophic method, possibilities include tidal or internal wave effects, short-term variations in spring thaw and runoff, variations in the discharge of water from Hudson Bay (Kollmeyer, 1966), variations in the North Atlantic Current, and of course, instrument error or error in the selection of depth of no motion.

The general trend of volume flow at section A3 throughout the season conformed to that described by Smith (1937), namely an increase in volume flow between April and May due to a "spring freshet", and then a decrease in June. In 1967 the volume flow attained a record value of over 11 sverdrups on 13 May, and the average dynamic current between stations 9928 and 9929 were on the order of 3 knots. Unfortunately, the CGC EVERGREEN did not reoccupy section 3 just before or after 13 May. The wind for the 24 hours previous to

station 9929 was from the south and averaged 14 knots. This opposed the flow of the Labrador Current and would have caused an Ekman transport toward the east. Since the geostrophic approximation does not directly consider the wind-driven current, it is possible that the actual flow was less than the geostropic flow. The volume flows for 22–27 April and 21–25 May indicate that there are, undoubtedly, accelerating forces.

Most of the contribution to the large volume flow came from solenoids between stations 9928 and 9929. The T-S diagram for station 9928, figure 30, is somewhat unusual. It shows that the water down to 20 meters was relatively warm and fresh, indicating it came from the Grand Banks. The water between 30 and 150 meters was cooler and fresher than normal Labrador Current water at the same depth; however, the salinity is the controlling factor and the water was less dense than normal. Between 200 and 350 meters the water appears to have characteristic temperatures and salinities of 1.75° C. and 33.85, somewhat colder, considerably fresher, and therefore, less dense than normal. Instabilities are evident in this depth interval. There was an abrupt change in the water properties between 250 meters and 265 meters. From 265 meters to 415 meters the water was considerably warmer, fresher, and less dense than normal. Below 475 meters the water had normal temperatures but was fresher and less dense. It is primarily the unusually low density of the water below 265 meters which caused the high dynamic stand of station 9928. Examination of the T-S curve for station 9929 in the dynamic trough shows that the water was colder and fresher than the normal mixed water type, and that the density was greater. It is this combination of unusually light water at station 9928 and slightly denser water at station 9929 that was the dynamic reason for the large volume flow on 13 May.

Comparison of the average temperature and salinity in the Labrador Current on 25 April and 13 May, figure 28, shows that although the temperature and salinity were similar on the two dates, the volume flow in May was larger by a factor of 3. The surface dynamic height with respect to the 1,000-decibar surface of the westernmost station, the trough station,

and the station just west of the trough, figure 31, shows again that the reason for the large volume flow on 13 May is that the water in the trough becomes denser while the water west of the trough becomes lighter.

Although the causes of the high-volume flow are dynamically obvious, the reasons for the conditions causing the dynamic stands at section A3 on 13 May are not clear. Recirculation of the Labrador Current south of section A3 and mixing probably formed the cold-salinity water responsible for the low dynamic stand at station 9929. The presence of unusually warm fresh water between 265 and 415 meters at station 9928 is difficult to explain. It may be that there was a cyclonic circulation and sinking of normal mixed water type from the 100-meter level. Smith (1937) gives examples in surface dynamic topographies of such recirculation. Even though such a recirculation may be possible, the sigma-t profile at section A3, figure 16, shows that such a recirculation, if it occurred on isentropic surfaces, probably took place well north of section A3.

The possibility that an error in the depth of no motion caused the large flow at section A3 on 13 May can be examined. Defant (1961), describes a method of determining the depth of no motion between two stations by examining the difference in dynamic height between the stations as a function of depth. The depth at which the difference in dynamic height is constant with depth is assumed to be a depth of no motion. Figure 32 shows that, by Defant's criteria, the depth of no motion is at least as deep as 1,500 meters. This would indicate that the flow is even greater than 11 sverdrups.

Examination of the time-series plot for the east-west leg of section A2 (fig. 26) shows that on 15 May the flow was at a minimum. This hardly agrees with the maximum at section A3 only 2 days previous. The net flow, with respect to the 700-decibar surface, between stations 9928 in section 3 and 9940 in section A2 was 8.1 sverdrups east-southeastward. This represents an average current of 4 cm/sec. The flow at right angles to this was, of course, indeterminant, but it is most likely that the east-southeastward flow represents the greater portion of the flow. It thus appears that most of the flow at the latitude of section A2 in May

spilled over the northeast corner of the Grand Banks west of the westernmost station in the section.

Previously unpublished results from a current meter attached 50 meters below a buoy moored by the Ice Patrol in position 44-53 N., 48-54 W., near the western end of section A3, in 1961 give support to the notion of large short-term changes in the Labrador Current in spite of reservations about the adequacy of the record obtained. The instrument failed to give reasonable readings of current direction, but did yield a readable record of current speed for a period of 48 days between 28 May and 15 July. Recently the speed record alone was read by eye in an effort to retrieve any usable data. Readings were made every 20 minutes, yielding 3,460 consecutive speed values. The average speed was 29.6 cm/sec, with maximum and minimum speeds of 64.2 and 6.5 cm/sec respectively.

The data after subjection to spectral analysis showed peaks in kinetic energy density at two points. Evidence of a slow-running clock in the instrument was seen in the fact that these peaks fit the inertial (17.0 hours) and the semidiurnal tidal (12.4 hours) periods when multiplied by a factor of 0.93. Thus it can be inferred that inertial and tidal periodicities can be expected in the flow along the eastern edge of the Grand Banks.

The time plot of the current record also revealed a marked 14- to 15-day periodicity, but the length of the record is far too short to draw any firm conclusions.

In summary, analysis of the data for 1967 has again shown the possibility of high frequency variability in the physical oceanography of this most interesting region where two major currents impinge upon each other. A part of the general problem of iceberg drift and deterioration must include not only better information on what periods of variability are significant in various areas of the region, but also understanding of the reasons for such variability.

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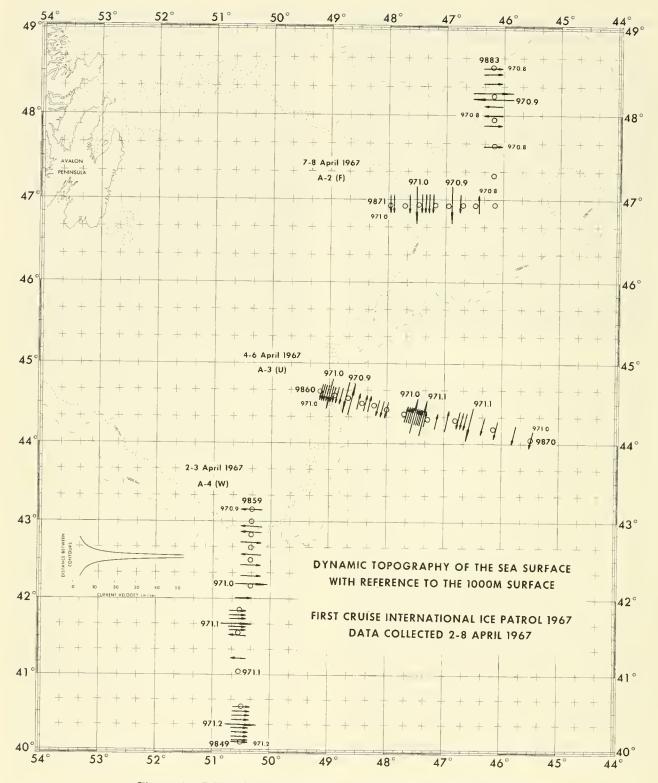


Figure 1. Calibration survey dynamic topography, 2-8 April 1967.

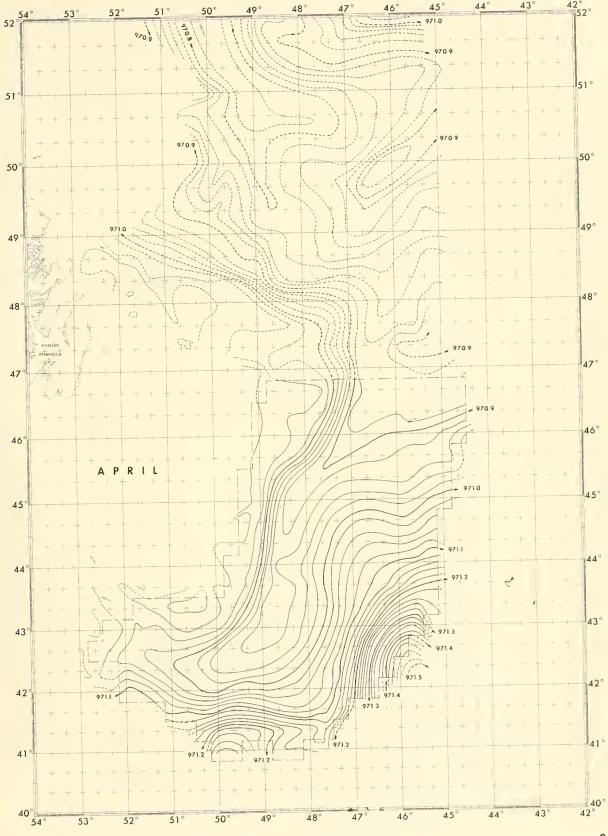


Figure 2. Normal dynamic topography, April.

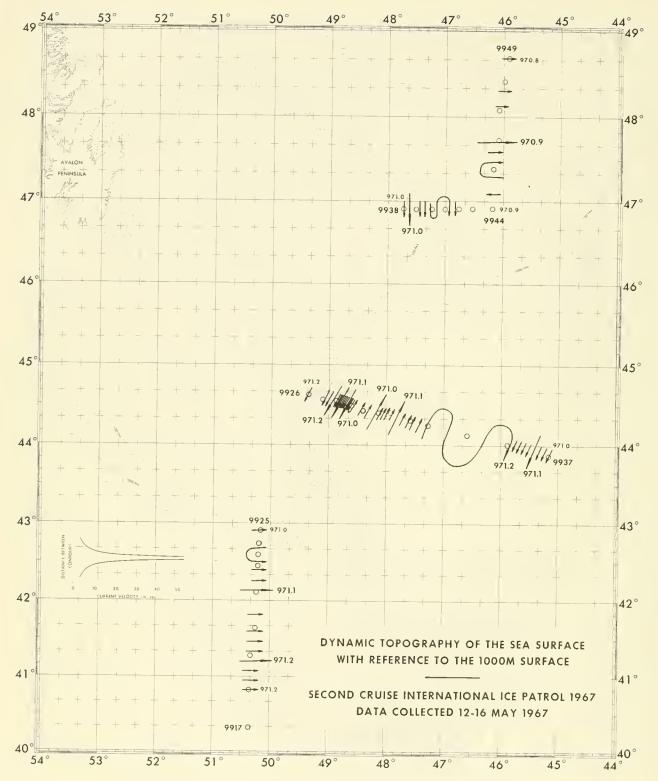


Figure 3. Calibration survey dynamic topography, 12-16 May 1967.

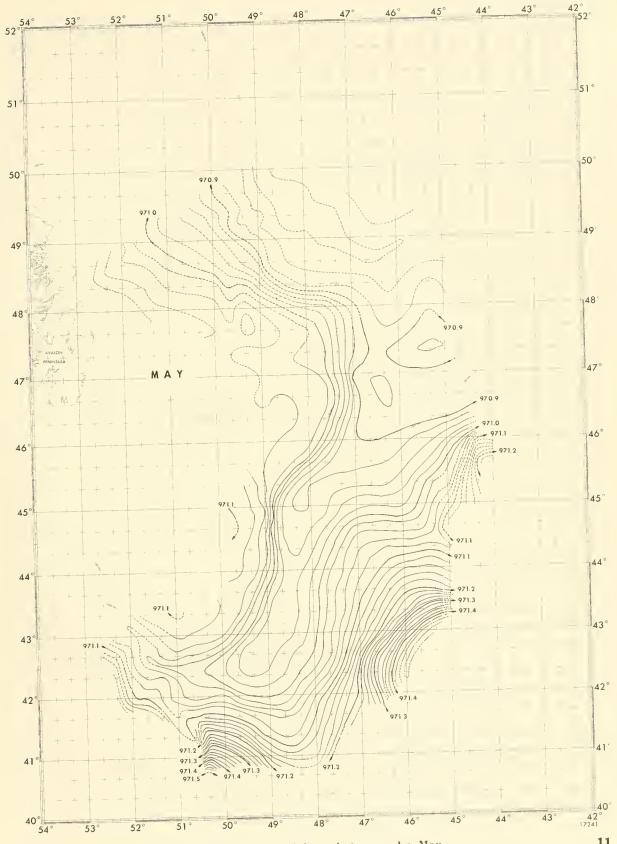


Figure 4. Normal dynamic topography, May.

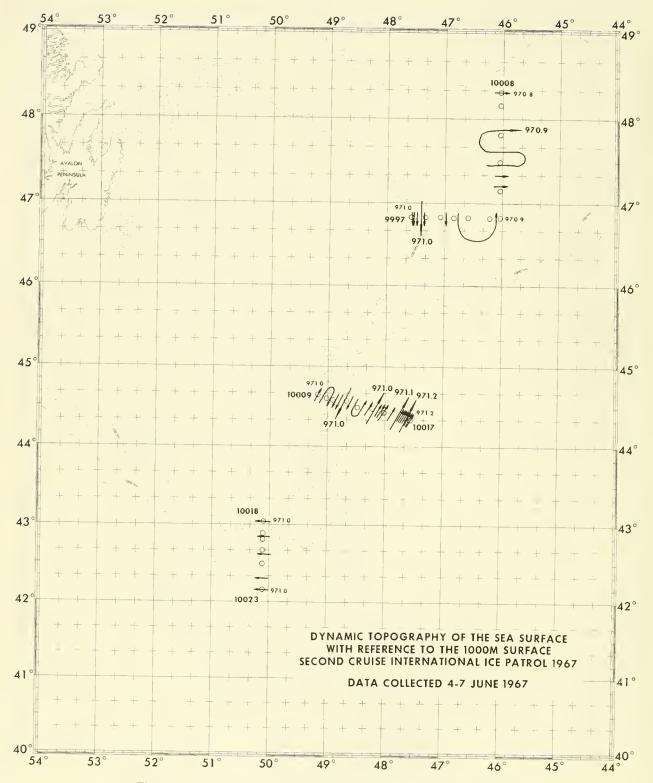


Figure 5. Calibration survey dynamic topography, 4-7 June 1967.

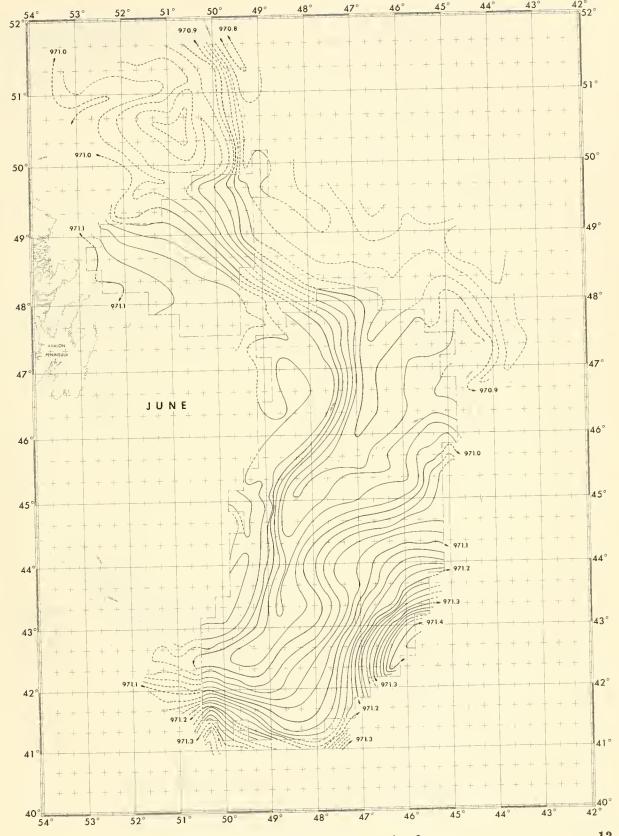


Figure 6. Normal dynamic topography, June.

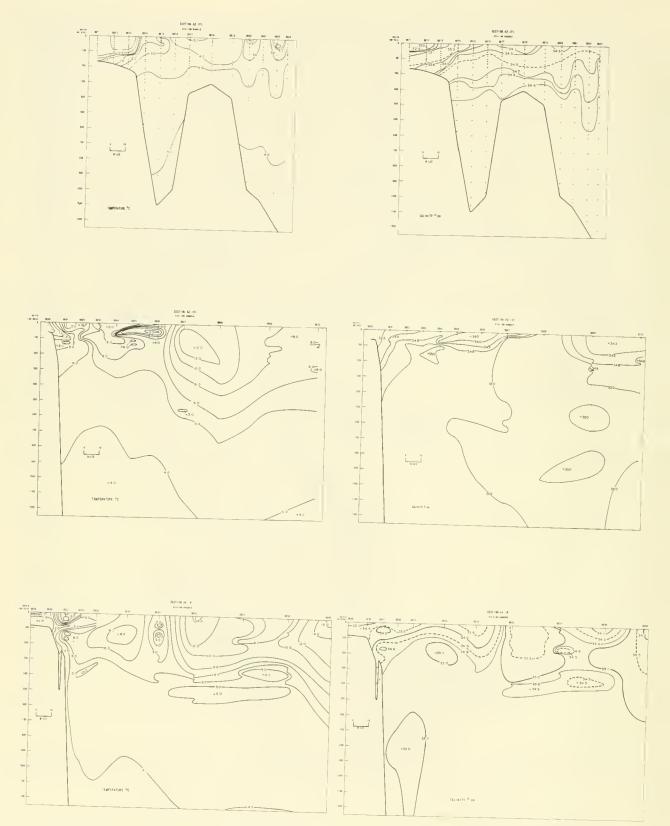


Figure 7. Temperature and salinity profiles, 2-8 April 1967.

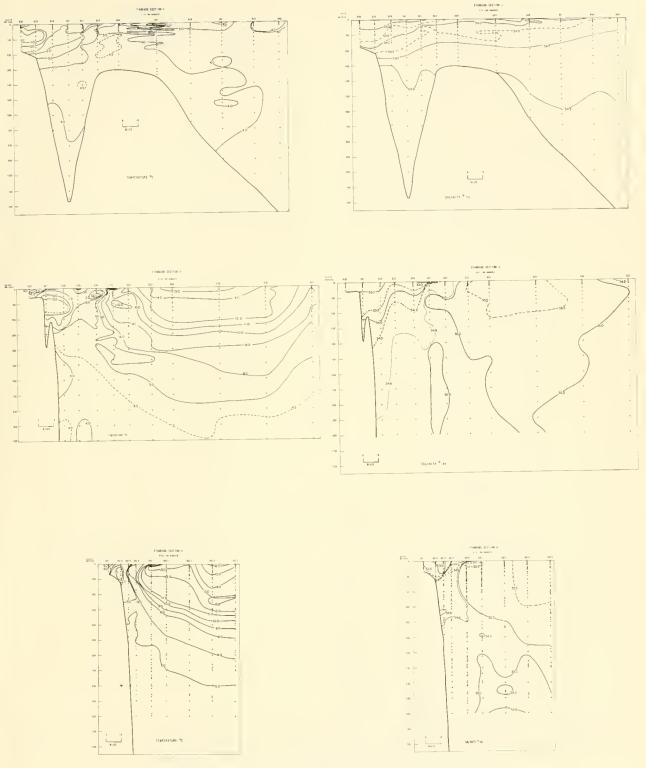


Figure 8. Temperature and salinity profiles, 12-15 May 1967.

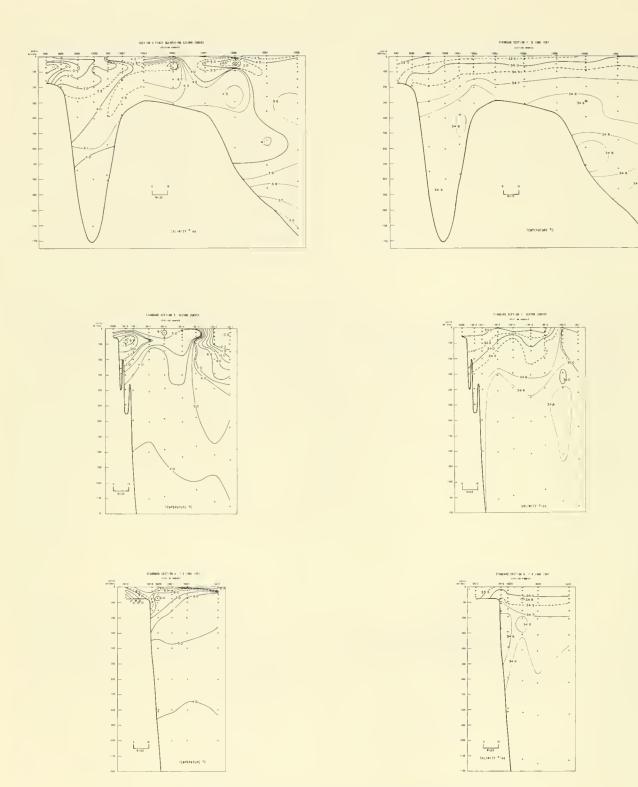


Figure 9. Temperature and salinity profiles, 4-8 June 1967.

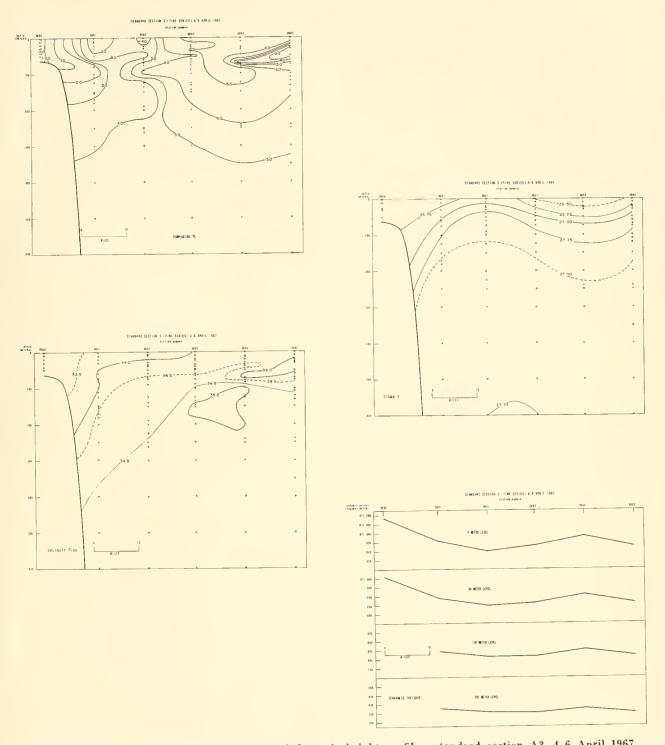


Figure 10. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 4-6 April 1967.

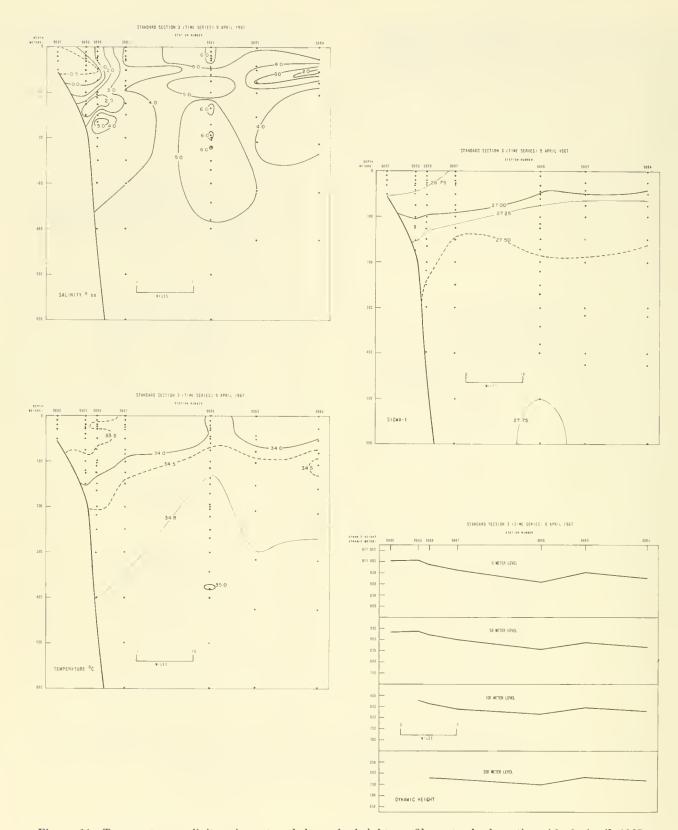


Figure 11. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 9 April 1967.

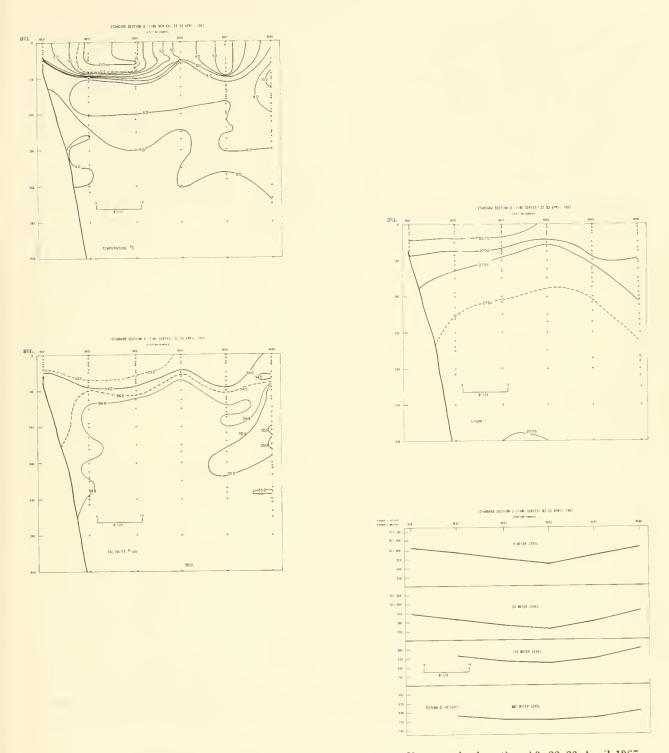


Figure 12. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 22-23 April 1967.

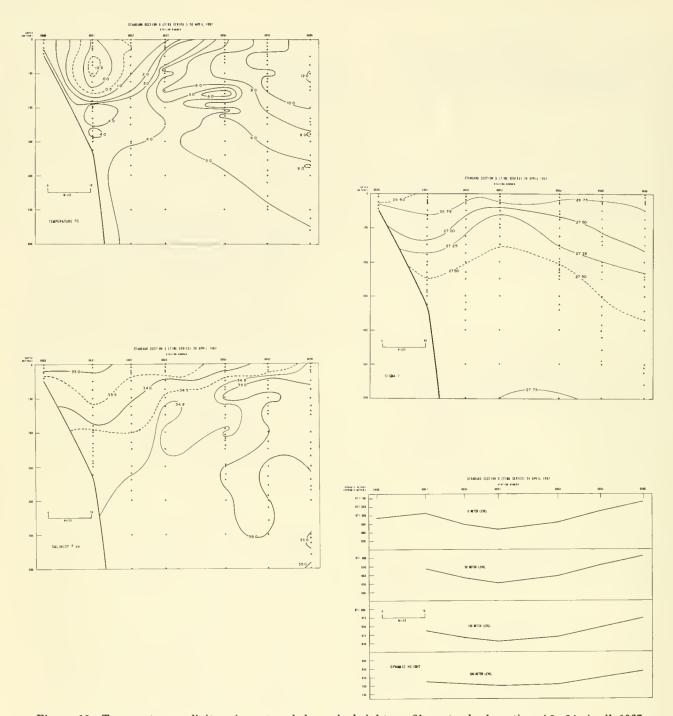


Figure 13. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 24 April 1967.

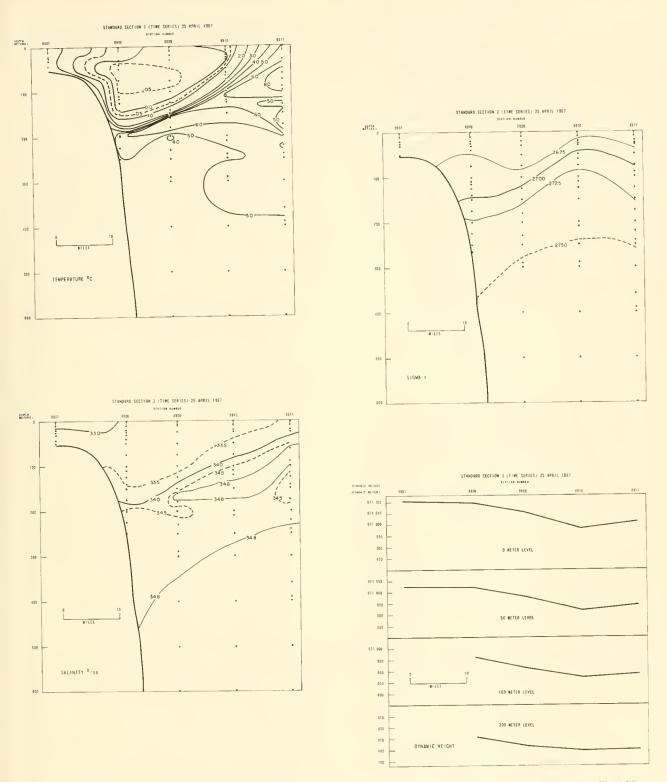
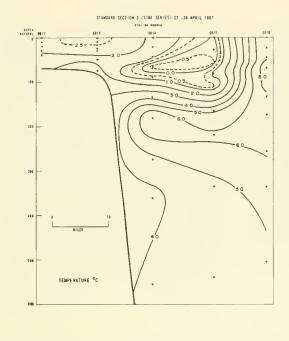
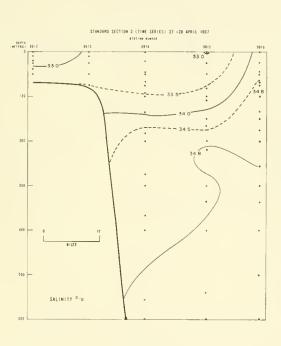
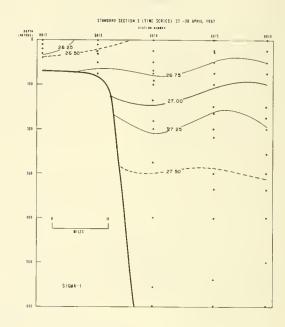


Figure 14. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 25 April 1967.







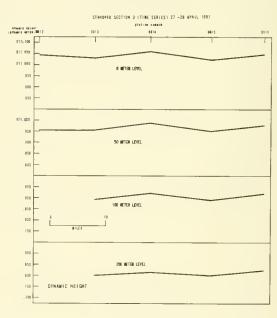


Figure 15. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 27-28 April 1967.

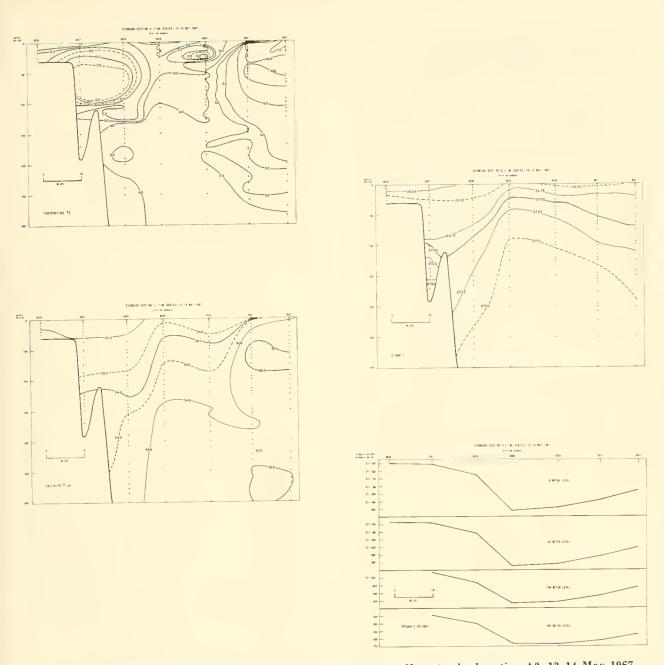


Figure 16. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 13-14 May 1967.

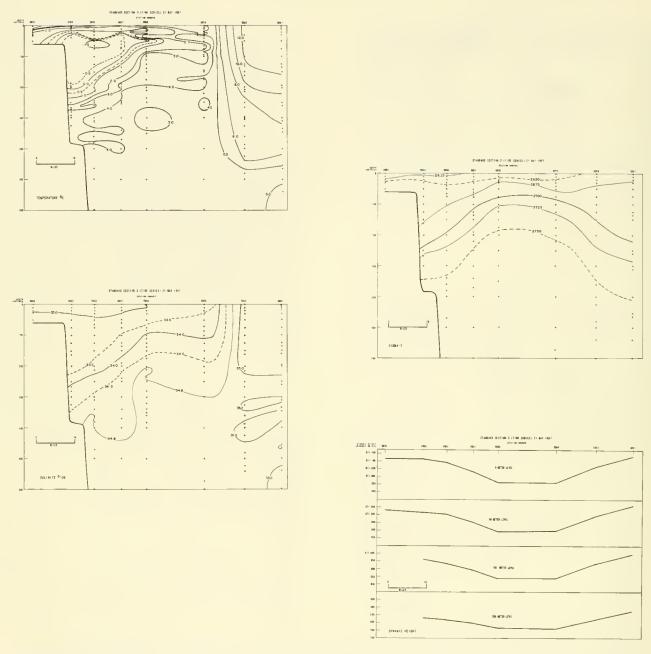


Figure 17. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 20-21 May 1967.

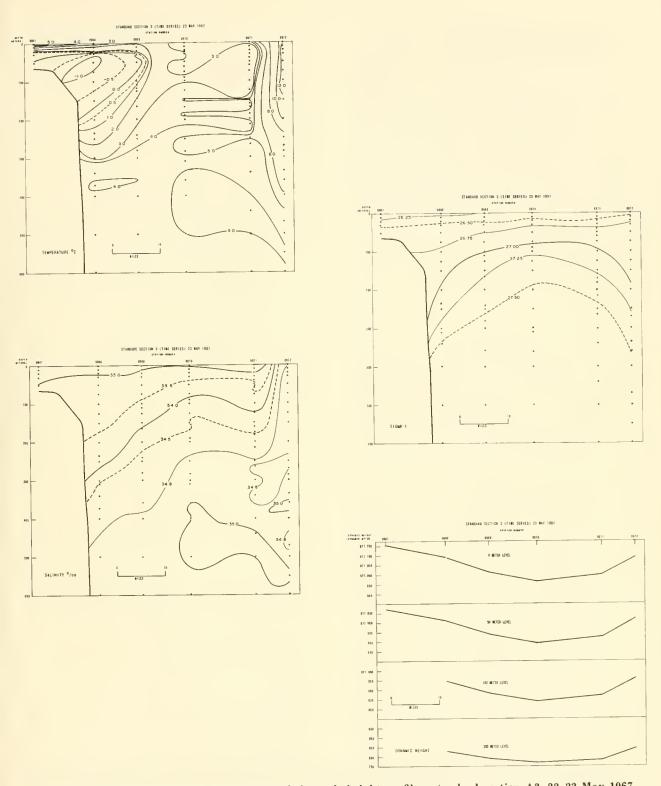


Figure 18. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 22-23 May 1967.

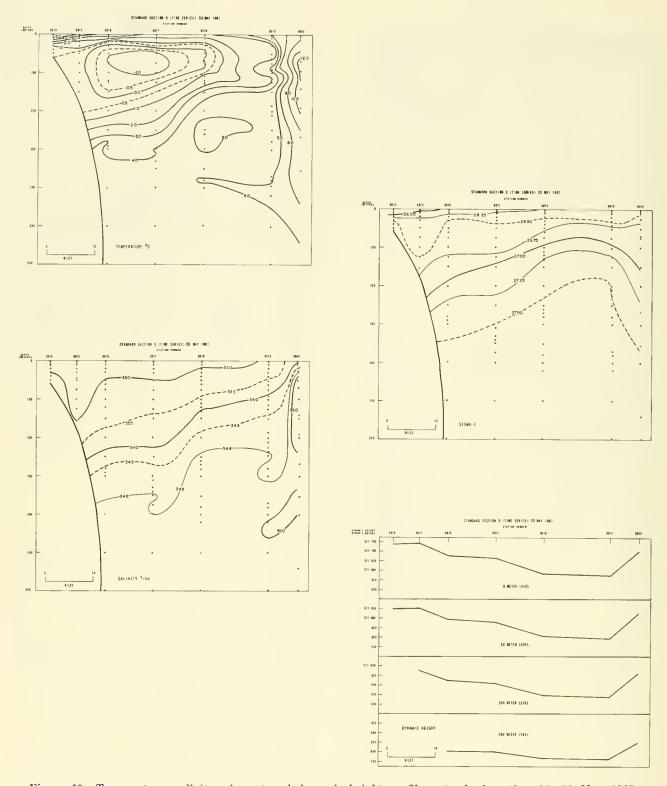


Figure 19. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 23 May 1967.

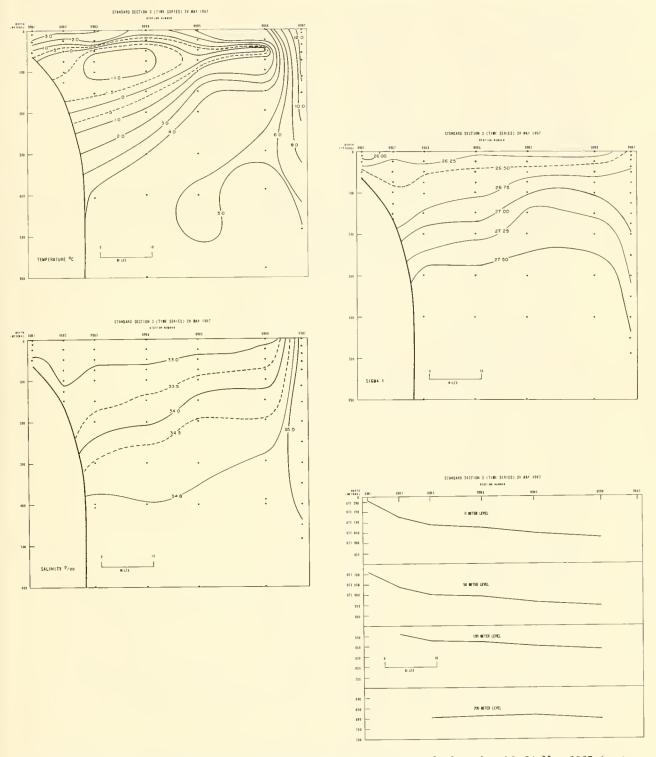


Figure 20. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 24 May 1967 (cast on station 9987 did not extend to reference level of 1,000 M).

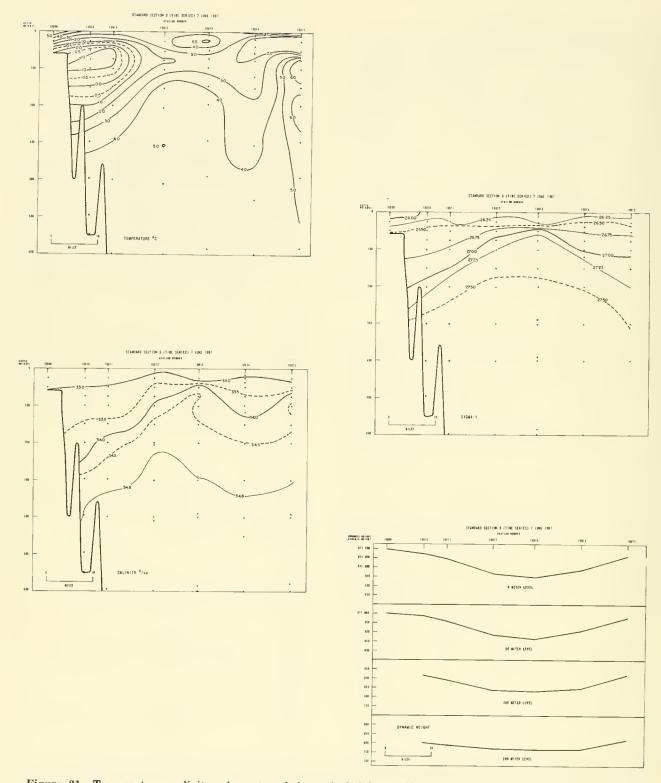


Figure 21. Temperature, salinity, sigma-t and dynamic height profiles, standard section A3, 6-7 June 1967.

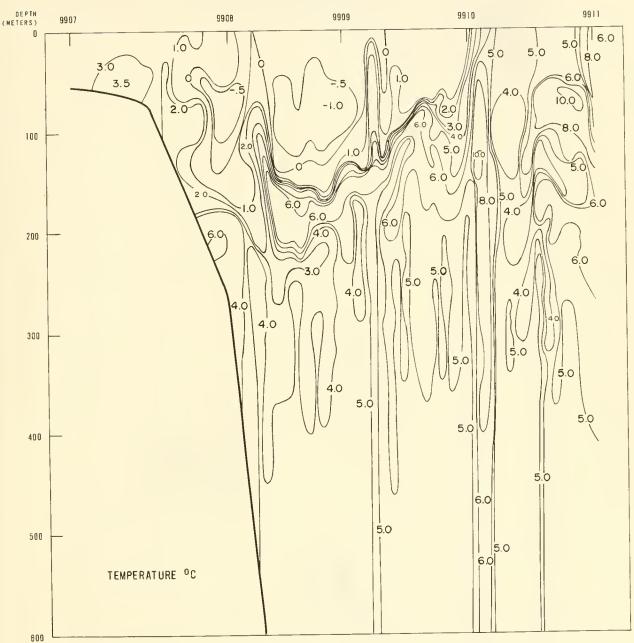


Figure 22. Detailed temperature structure of section A3 as determined by XBT casts, 25 April 1967.

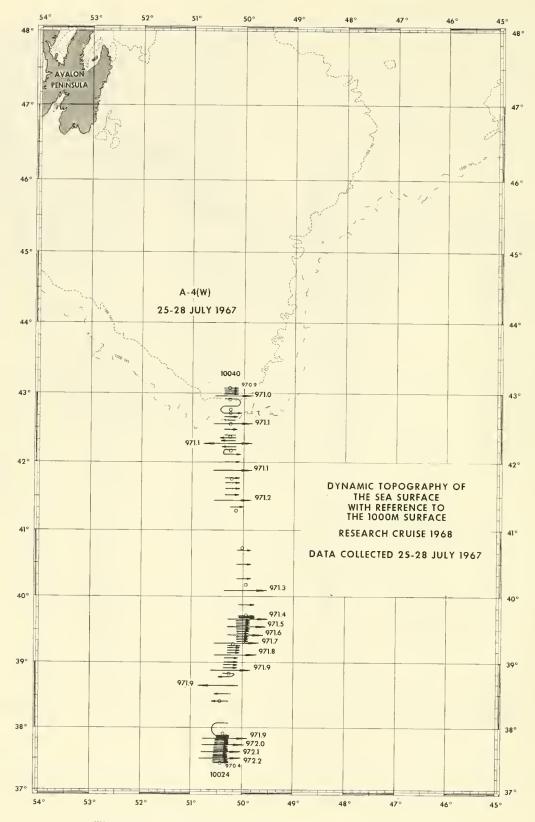
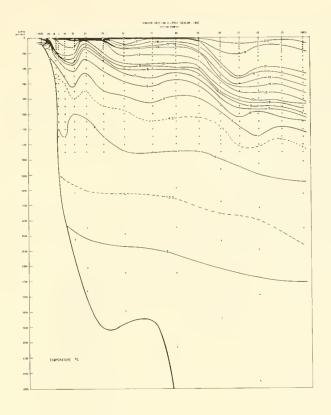


Figure 23. Dynamic topography section A4, 25-28 July 1967.



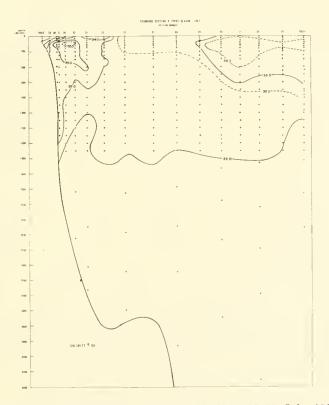
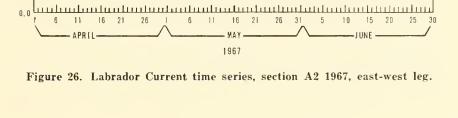


Figure 24. Temperature and salinity profiles, 25-28 July 1967.

Figure 25. Mean and 1967 temperature-salinity relationships in the Grand Banks region.



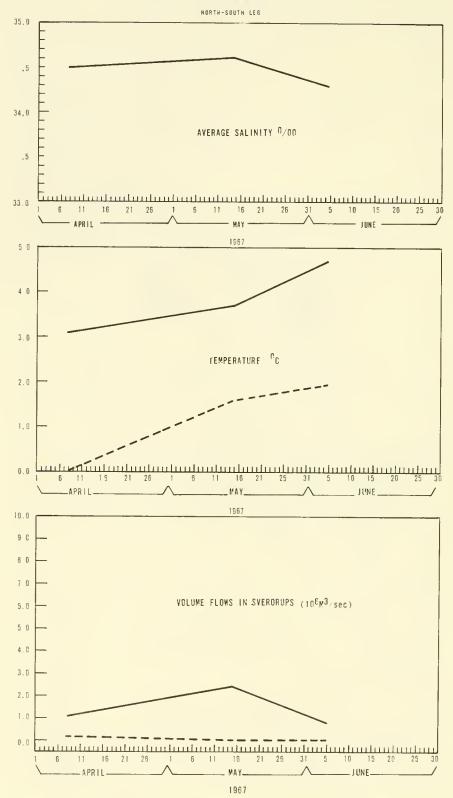


Figure 27. Labrador Current time series, section A2 1967, north-south leg.

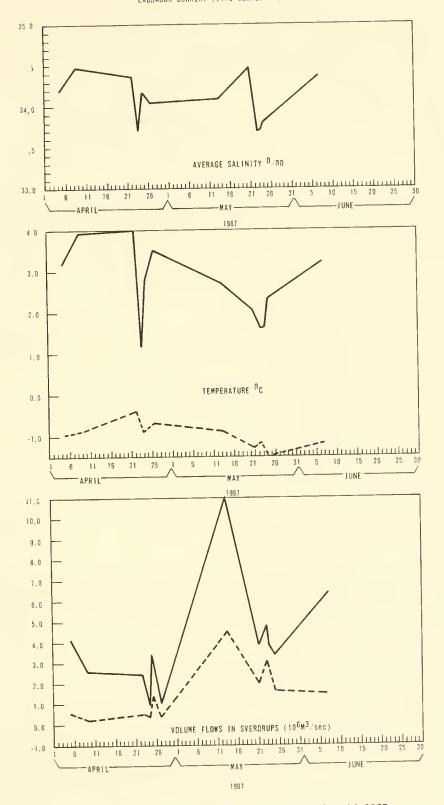


Figure 28. Labrador Current time series, section A3 1967.

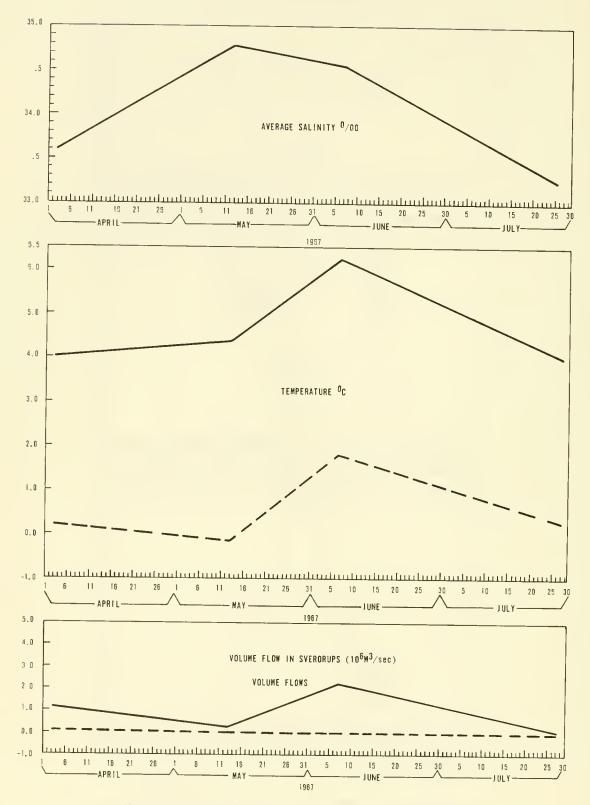


Figure 29. Labrador Current time series, section A4 1967.

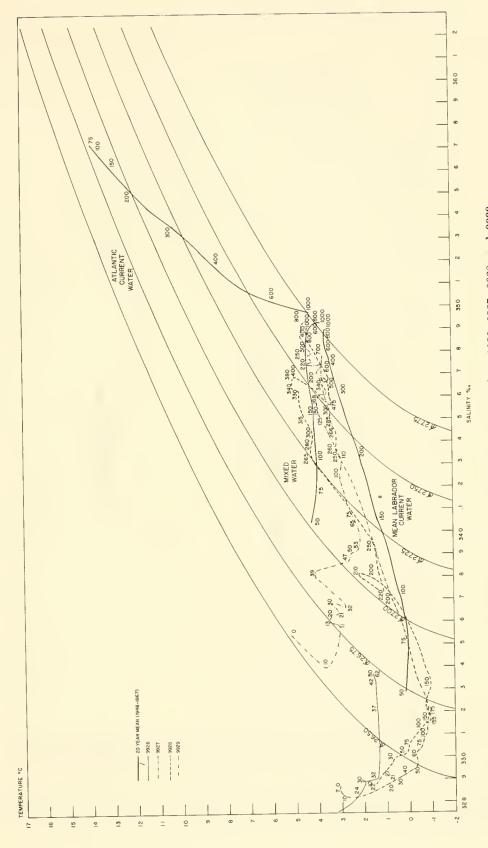


Figure 30. Temperature-salinity curves, stations 9926, 9927, 9928, and 9929.

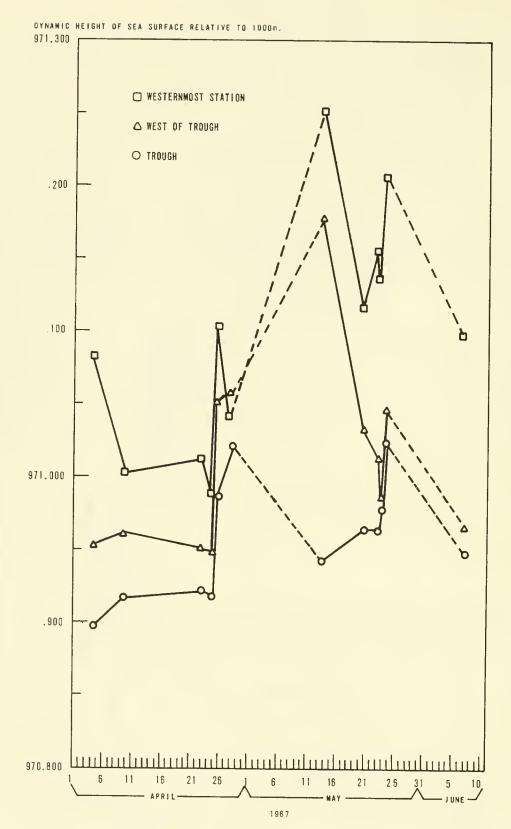


Figure 31. Surface dynamic height of stations in the trough, just west of the trough, and on the Grand Banks, 1967.

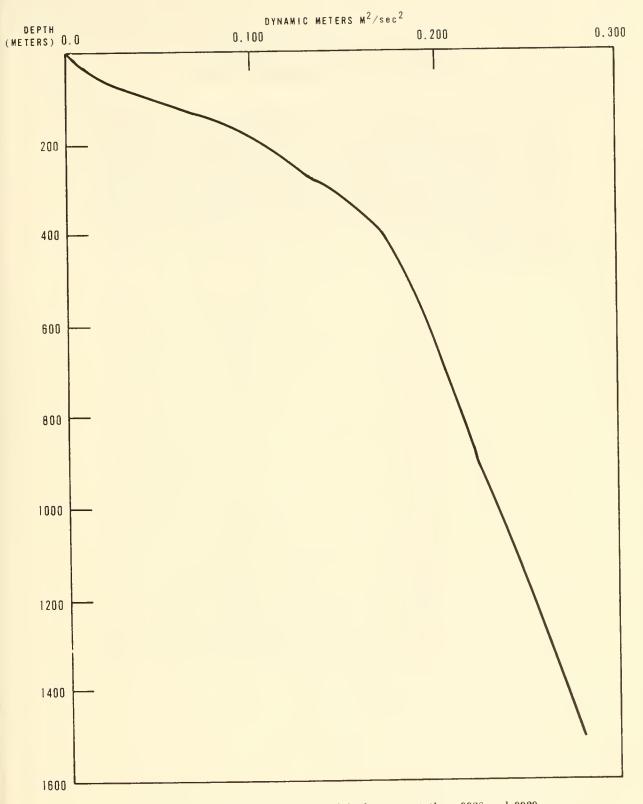


Figure 32. Difference in dynamic height between stations 9928 and 9929.

Table of Oceanographic Data

The following are the observed and interpolated data for the Coast Guard Oceanographic Unit oceanographic stations taken in conjunction with the International Ice Patrol 1967 in the Grand Banks of Newfoundland area. The data were obtained by the CGC EVERGREEN (WAGO-295) from 3 April 1967 to 28 July 1967. Presentation is from National Oceanographic Data Center Cruise Listing No. 31-8008, 31-8016, and 31-8017.

Note.—A complete description of codes can be found in NODC publication M-2, "Processing Physical and Chemical Data From Oceanographic Stations".

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NCE	SHIP		55	LDNGI	INDC PART	MARSDEN SOUARE	STATION TIME	YEAR	DRIGINATO	11041	DEPTH TO	MAX. DEPTH	085	WAVE SERVATIONS	THER	CLOUD		ST.	DDC ATION IMBER	
ID. ND.	CODE	LATITU	1/10	- EDNG!	1/10 5 2		DAY HR.		ND. NUI	ABER	DITOM	S'MPL"				TYPE AMT				
008	EV	4103	N	050	32 W		4 03 09		A ID TE SAP		389		35	4 2	X2	0 3	1	(00031	
						CDLDR	RANS, DIR	SPEED METE	R DRY	VIS.	NO. DØS. DEPTHS	DBSERV	CIAL 'ATIDNS							
						CODE	(m)	ORCE (mbi			38	-								
						DT	SD 36 5	523 05		7 500				. PO4~P	TOTAL-P	ND2-N	ND3-N	SI Da-Si		5
	MESSENGR TIME	LCAST	CAR		DEPTH (m)	1 "C	s ·/	SIG M A -T	ANOMALY-X107	∑ ∆ D DYN. M. x 10 ³	AEF 20	DCITY	D2 m1/	pg = 01/1	yg - 01/t		ug - at/l	yg - at/1	pН	c
	HR 1/10	-		-							1									
		!	51	TD	0000	0950	3455	2671	0013456	0000		880		·						
	094	4	OB:		0000	0950 1025	34552 3481	2671 2678	0012792	0013		+880 +912								
			0 B 3	TD S	0010	1025	34808	2678				912								
			5	T D	0020	1120	3503 35030	2678 2678	0012792	0026		+951 +951								
	00	5	OB:	S TD	0020	1120 1080	3494	2678	0012788	0039	14	4937								
			OB:		0030	1080	34940	2678	0013549	0064		4937 4949								
				TD	0050	1103 1103	3503 35030	26B1 2681	0012568	0004		4949								
			OB.	5 TD	0075	1199	3528	2683	0012504	0095		4990								
			OB	5	0075	1199	35280 3517	2683 2683	0012487	0127		4990 4976								
			5 0B	TD S	0100 0100	1150 1 1 50	35170	2683	0012.07	ŭ- L ,	1	4976								
			ОВ	S	0105	1104	35075	2685				4959 4960								
			OB	S TD	0116 0125	1102 0985	35075 3484	2685 2687	0012150	0157	1	4917								
			ОВ	S	0125	0985	34840	2687	0011890	0187		4917 4804								
			S OB	10	0150 0150	0694 0694	3430 34298	2690 2690	0011090	0101		4804								
			08		0165	0625	34205	2691			1	4777								
			08		0175 0200	1010	35095 3514	2703 2705	0010650	0244	1	4945								
			08	TD SS	0200	1018	35140	2705				4945								
			OB		0215	1035 0940	35223 3515	2708 2719	000939	0294		4955 4925								
			08	5TD 3S	0250 0250	0940	35150	2719			1	4925								
			S	OTO	0300	0648 0648	3478 34780	2734 2734	000792	033		4816 4816								
			08		0300 0320	0697	34890	2736			1	4840								
			OB	35	0365	0400	34590 34765	2748 2750				4723								
			Q E	35 5TD	0382	0510 0412	3466	2752	000609	5 040	7 1	4735								
			OB		0400	0412	34658	2752				4735 4745								
			08		0420	0426 0493	34705 34815	2755 2756				4775								
				BS	0435	0480	34810	2757				4771								
				BS	0470	0514 0513	34901 3492	2760 2762	000540	4 046		L4792 L4797								
				STD BS	0500 0500	0513	34923	2762			1	4797								
			:	STD	0600	0477 0477	3496 34958	2769 2769	000482	1 051	-	L4799 L4799								
				BS STD	0600 0700	0446	3494	2771	000470	4 056	4]	14802	2							
			0	BS	0700	0446	34938	2771 2774	000452	6 061		14802 14816								
				STD BS	0800 0800	0438 0438	3496 34963	2774	000432		1	14816	•							
				STD	0900	0430	3496	2774	000454	5 065	-	14829 14829								
				BS STD	0900 1000	0430 0422	34961 3497	2774 2776	000451	6 070		14843								
				BS	1000	0422	34965	2776				14843								
				BS	1020 1030	0419 0401						14845 14839								
				BS STD	1100	0411	3497	2777	000445	3 074	5	1485	5							
			0	BS	1100	0411		2777 2777	000450	4 079		14859 14870								
				STD BS	1200 1200	0407 0407						1487	0							
				STD	1300	0384	3495	2778	000446	6 083		1487 1487								
				BS	1300 1400	0384 0382		277B 2779	000446	9 088	0	1489	3							
			0	BS	1400	0382	34953	2779				1489 1490								
				STO	1500 1500	0379		2779 2779		94 092		1490								
			C	BS	1500	037	, ,,,,,													

CTRY D. C	SHIP LATITU	IDE LOI	NGITUDE HE	MARSDEN	STATION TI	ME YE,	AR C		ATOR'S	\exists	DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA		1	ODC ATION	
CDDE NO.	ODE	1/10	1/10	10° 1°	MO DAY H	R.1/10		NO.	TATION	_	воттом	S'MPL'		HGT PER S		E TYPE AMI	NÜ	MBER	
31 8008	EV 4134	N 05	032 W	150 10 WA	04 03 1	UND T		11P 98		\perp	3977	15	33	3 2	X 4	0 3		0004	
				COLOR	TRANS. DIR.	SPEED	BARO- METER	ORY	WET	VIS.	NO. DEPTHS	SPE	CIAL ATIONS						
				DT	SD 33		085	094	089	-									
ME	SSENGR CAST	CARD	0.000		T	T '	Τ,	PECIFIC VOLU			41	INID. T		T	1		 		77
н	TIME OF NO.	TYPE	OEPTH (m)	1 °C	s */	SIGMA-	-1	ANOMALY-X1	07 DY	△ D N. M.	VELO	CITY	O2 ml/[PO4-P yg - at/l	TOTAL-		51 O4-5i 1/10 - 94	рН	°C C
			0000																+
	135	STD OBS	0000	1429 1429	3563 35628	2663 2663		001419	6 0	000		059 059							
		STD OBS	0010 0010	1429 1429	3563	2663		001422	6 00	014	15	061							
		STD	0020	1424	35628 3563	2663 2664		001417	5 00	028		061 061							
	003	OBS STD	0020 0030	1424 1423	35625 3563	2664 2664		001418			15	061							
		OBS	0030	1423	35625	2664		001416	4 00	043		062 062							
		STD OBS	0050 0050	1370 1370	3557 35570	2671 2671		001357	9 00	070		047							
		OBS	0060	1378	35619	2673						047 052							
		OBS STD	0068 0075	1317 1390	35475 3571	2674 2677		001302	6 0	104	15 ₀								
		OBS	0075	1390	35710	2677		001302	0 0.	-04		060							
		OBS STD	0085 0100	1398 1348	35735 3564	2678 2681		001277	2 n:	136	15(15(
		OBS OBS	0100	1348	35640	2681			_		150	149							
		STD	0110 0125	1348 1322	35642 3559	2681 2682	(001268	1 01	168	15(15(
		OBS	0125 0150	1322	35592	2682					15()44							
		STD OBS	0150	1276 1276	3549 35490	2684 2684	(001260	5 01	199	15(15(
		OBS OBS	0170 0175	1228	35405	2687					150	17							
		STD	0200	1310 1175	35648 3544	2689 2700	(001119.	2 02	259	150 150								
		OBS STD	0200 0250	1175	35442	2700					150	004							
		OBS	0250	1010 1010	3527 35270	2716 2716	(000967	0 03	311	149								
		STD	0300 0300	0900 0900	3517 35170	2727 2727	(000871	2 03	357	149	18							
		OBS	0360	0755	35050	2740					149								
		OBS OBS	0380 0390	0595 0636	34800 3 4 900	2742 2745					148								
		STD	0400	0550	3478	2746	C	006800	04	34	147								
		OBS OBS	0400 0410	0550 0488	34780 34705	2746 2748					147								
		OBS	0420	0535	34780	2748					147	91							
		OBS OBS	0440 0460	0452 0510	34690 34810	2751 2753					147								
		OBS STD	0478 0500	0510 0581	34830 3499	2755					147	91							
		OBS	0500	0581	34990	2759 2759	U	0005767	04	97	148								
		OBS OBS	0514 0540	0581 0487	34990 34880	2759 2762					148								
		OBS	0545	0502	34930	2764					147								
		STD OBS	0600 0600	0495 0495	3495 34953	2767 2767	0	005078	05	51	148								
		STO	0700	0467	3496	2771	0	004773	06	01	148	12							
		OBS STD	0700 0800	0467 0462	34963 3499	2771 2773	0	004621	. 06	48	148								
		OBS	0800	0462	34990	2773					148	26							
		STD OBS	0900 0900	0448 0448	3499 34990	2775 2775	0	004553	06	94	148								
		STD OBS	1000	0427	3499	2777	0	004393	07	38	148	45							
		STD	1100	0427 0417	34990 3499	2777 2778	0	004366	07	82	148 148								
		OBS STD	1100 1200	0417 0408	34990	2778					148	58							
		obs	1200	0408	3499 34990	2779 2779	0	004348	08	26	148								
		STD OBS	1300 1300	0401 0401	3499 34990	2780	0	004352	08	69	148	85							
		STD	1400	0389	3499	2780 2 78 1	0	004288	09	12	148								
		OBS STD	1400 1500	0389 0383	34990 3499	2781 2782		004297			148	96							
		OBS	1500	0383	34990	2782	Ü	004297	09	22	149 149								

																											_
REFERENC	E T					, <u>*</u>	MARSE	DEN	STATION TIM	E			DRIGINA			OEPTH	н	MAX. DEPTH	0858	WAVE ERVATIO	2115	WEA-	CLOUD			NODC	
CTRY IC	5.	CODE	LATITU	OE 1/10	LONGI	NOCTE 30 PL	SQUA		(GMT)	1/10	YEAR	CRUISE NO.	N 2.	TATION		0110	ı M	OF S'MPL'S	DIR	NGT PER	SEA	COOE	TYPE AM	T		NUMBER	
3180	-	FV	4151		0503		150		04 03 1	- Ł	1967	IIP	98			374	9	15	34	4 3		l xo	0 3		1	000	5
, 51,00	0 4						Ė	WAT		N O SPEED	BARO	,. —	AIR TEA	AP. C WET	VIS.	NO.	۰ ۱ ۵	SPEC SBSERV	ATIONS								
							C	COLOR	TRANS OIR.	FORC			ULB	BULB	-	DEPTH	13										
								DT	SD 36	508	08	8 0	50	044		40									Tara		5
		MESSENGR TIME		CAR		OEPTH (m)	т	°C	s */	SIG	MA-T	SPECIFIC	VOLU	ME 07	∑ A D 2 N. M x 10 ³	, VI	ELOC	OF	0 2 m1/l	PO 4-		OTAL-P yg - oi/l	NO2-N ug - al/l	NO3-N pg = al/l			CC
		HR 1/10		TYP	E .		-			-					X 10	+-	_	-		† –	_				1		
				ا د.	TD	0000	0.	426	3328	26	642	001	620	7	0000		46			•							
		16	1	08		0000	0	426	33281	26	542				0036		46										
				S 08:	TD	0010		410 410	3329 33290		644 644	001	1599	1	0016		146										
					TD.	0020	0	410	3333	2	647	001	1567	5	0032			54									
		00	3	08		0020		410 430	33333 3340		647 65 1	00	1537	6	0047			554									
				0B	T D S	0030		430	33400	2	651	•••				1	146	65									
				ОВ		0039		473 345	33450 3343		650 662	00	1434	٠9	0077			85 32									
				S QB	TO IS	0050		345	33431		662	00.		. ,]	146	532									
				08	S	0060		268	33400		666							500 510									
				0B 08	-	0064 0068		287 259	33460 33460		669 671					1	145	599									
				S	TD	0075	0	342	3360	2	675	00	1306	55	011			637 637									
				0B 08		0075 0092		342 444	33600 33870		675 686						-	687									
					TD.	0100	0	280	3384	2	700	00	1070	0.2	014			618									
				0 B	_	0100 0107		280	33843 33941		700							618 656									
				0 B	TD	0125		185	3387	2	710	00	097	61	016			581									
				ОВ		0125		185	33869 33924		710							581 572									
				08	35 5TD	0135)160)241	3403		718	00	090	14	019	0	14	612									
				OE	35	0150	C	241	34027		718							612									
				O E	_	0181		390 373	34380 34385		733						14	680									
				5	STD	0200	(410	3450	2	740	0.0	070	74	023			699 699									
					BS BS	0200)410)421	34499 34534		2740 2742							708									
					STD	0250	(479	3467	2	2746	0.0	066	11	026			738									
					BS BS	0250 0273)479)597	34668 34896		2746 2750							793									
					85	0293		3492	34780	2	2753							752									
					STD	0300		0505 0505	3480 34799		2753 2753	0.0	059	91	029			759 759									
					8s Bs	0300		0564			2757						14	790									
				01	85	0382		0494			2763 2763	0.0	051	64	035			769 773									
					ST0 8S	0400		0495 0495			2763	00	, , , , 1	54	0-3		14	773									
				0	BS	0432	1	0501	34923		2763	0.0	0049	40	040	2		781 784									
					STD BS	0500 0500		0481 0481			2766 2766		, , , ,	4,7			14	784									
					STD	0600		0465	3494		2769	0.0	0048	47	045	1		794 794									
					BS STD	0600 0700		0465 0458			2769 2772	01	0046	56	049	9	14	808									
					85	0700		0458	3496	4	2772							4808 4820									
					BS STD	0783 0800		0454			2772 2773	01	0045	555	054	-5		+820 4817									
					85	0800		0441	3496	4	2773				^ E -	20		4817									
					STD	0900 0900		0420			2776 2776	0	0044	+00	059	, U		4825 4825									
					STD	1000		0410	3496		2777	0	0043	375	063	34		4838									
				0	88	1000		0410			2777 2778	0	0043	321	06	77		4838 4849									
					STD	1100 1100		0398			2778						14	4849)								
					ST0	1200		038	7 3496		2779	0	004	275	07.	20		4862 4862									
				С	BS STD	1200 1300		038			2779 2780	0	004	314	07	63	1	4877	,								
				C	BS	1300		038	3 3496		2780	_	001	227	0.0	0.6		4877 4891									
				0	STD 085	1400 1400		037		4	2780 2780	0	004	331	80	00	1	4891	L								
				·	STD	1500)	037	5 3496		2780	0	004	384	08	50		490									
				(OBS	1500)	037	5 3496	4	2780						1	490									

REFERENCE	SHIP	1 4 7171	.n. T	LONG	171105	F 2	MARSOEN	STATION T	IME	VEAR	_	ORIGINA			DEFTH	MAX. DEPTH		WAVE ERVATIONS	WEA	- CLOUD			NODC	
CODE NO.	COOE	LATITU	1/10	LONG	17/10	INOC		MO DAY H		YEAR	CRUISE NO.		TATION	ŀ	OT MOTTOS	OF 5'MPL'S		HGT PER SI	THE COD	E TYPE AM			STATION	
31800	8 EV	4210	N C	050	20 W		150 20			1967	IIP	98	54		3475	15	34	2 2	XC				000	6
	-, ,					' '	WA		VINO	BAR		AIR TEN		vis.	NO.	SPEC		12121	1 /	, , , , ,	'		000	01
							COLOR	TRANS. OIR.	SPEED OR FORCI	METE (mbs		DRY UL8	W ET BULB	CODE	OBS. DEPTHS	OBSERV	ATIONS							
							ОТ	SD 36			1 0	72	072		36									
	MESSENGR	CAST	CAR	n		_				_		, volu		∆ D		IND		PO 4-P	TOTAL-	NO. N	NO N	51 04-	F:	s
	11ME HR 1/10	및 NO.	TYP		OEPTH I	m)	T *C	s °/	SIG	MA-T	ANOM	ALY-X10	, 0	YN, M. x 10 ³	, AETO	CITY	O2 ml/l	µg - at/	μg - at/		NO3-N			C
																			-					
	•			ID.	000		0754	3385		46	001	579	7 0	000		797				•		·		
	18	2	0B3	S TD	000		0754 0745	33850 3390		46 51	001	533	, n	016		797 795								
			089		001		0745	33898		51	001	,,,,	4 0	010		795								
	00	2	OB:		001		0650	33830		59						758								
			0B3	TD 5	002		0712 0712	3401 34010		64	001	407	4 0	030		786 786								
				TD	003		0738	3408		66	001	391	6 0	044		798								
			085		003		0738	34080		66						798								
			0B;		003		0722 0751	34113 3421		71	001	319	5 0	071		794 808								
			085		005		0751	34205		74	001		, ,	0 1 1		808								
			OB:		006		0795	34360		80			_			830								
			51 085		007		0815 0815	3450 34500		88	001	194	8 0	103		841 841								
			089		008		0855	34580		88						858								
			S1		010		0864	3479		03	001	056	9 0	131		867								
			085 085		010		0864 0940	34790 34975		03						86 7 900								
			08		012		0905	34975		11						888								
				TD	012		0923	3504		13	000	967	9 0	156		897								
			0B;		012		0923 0951	35040 35120		'13 '15						89 7 909								
				T D	015		0920	3514		21	000	895	9 0	180		901								
			085		015		0920	35138		21			_			901								
			08	TD.	020		0780 0780	3503 35030		35 35	000	773	5 0	221		855 855								
			08		022		0707	35001		143						830								
				TD	025		0696	3501		45	000	682.	2 0	258		830								
			OB:	5 TD	025		0696 0598	35005 3494		45 53	000	608.	2 0	290		830 7 99								
			089		030		0598	34940		53	000			- , 0		799								
			089		035		0553	34959		60						789								
			0BS		037		0492 0481	34897 3493		62	000	485	7 0	345		767 767								
			089		040	0	0481	34929		66						767								
			51		050		0456	3494		70	000	458	7 0	392		774								
			083 083		050		0456 0454	34941 34963		70						774 781								
			083		056		0425	34937		73						771								
				TD	060		0425	3494		73	000	434	6 0	437		777								
			085 S1	5 TD	060		0425 0420	34939 3497		73	000	417	3 0	479		777 792								
			OBS		070	0	0420	34968	27	76	000			, ,		792								
			51		080		0407	3496		77	000	417	0 0	521		803								
			0B3		080		0407 0403	34961 3496		77	000	421	0 0	563		803 818								
			089		090	0	0403	34962			000					818								
				r D	100		0389			79	000	414	2 0	604		829								
			0B5		100		0389 0385	34961 3496		79	000	418	3 0	646		829 844								
			OBS		110		0385	34961	27	79	000				14.	844								
				TD	120		0375	3496	27	80	000	414	9 0	688	14	857								
			083	S T D	120		0375 0375	34961 3496		80	000	422	8 0	730		857 873								
			085		130	0	0375	34962		80	000	722		, 50		873								
			5	TD	140	0	0368	3496	27	81	000	422	4 0	772	14.	887								
			0B3		140		0368 0363	34962 3496		81	000	425	1 0	814		88 7 902								
			0 B S		150		0363	34961			000	720	1 0	014		902								
			, 50						_ '						- '	,								

REFERENCE	SHIP				MARSOEN SOUARE	STATION	IME	YEAR		GINATO			DEPTH	MAX.		WAVE ERVATIONS	WEA- THER	CLOUG		5	NOOC
TRY 10.	COOE	LATITU	1/10	LONGITUOE	10° 1°	MO OAY		ILON	CRRIZE		TION MBER	80	моттом	OF S'MPL'	'S Dir.	HGT PER SE	0000	TYPE AMI		1	UMBER
31800	8 EV	4230		05020 W	150 20		205	1967	IIP	9855	5	2	2834	15	34	2 2	X 2	0 3			0007
3 I/0 U U	d CA I	4230	14 1	07020 41	WA	TER	WIND	BARC)- Al	R TEMP.	°C	VIS.	NO.	5.98	ECIAL						
					COLO	TRANS. OIR.	SPEE! OR FORC	METE (mbs		LB 8	WET C	3000	DEPTHS	OBSER	ZNOITAV						
					DT	SD 36			5 07	72 (072	6	30								
	MESSENG			T			1		SPECIFIC	VOLUME	1 2 /	20	SOI	ОИП	O 2 m l/l	PO ₄ -P	TOTAL-P	NO2-N	NO ₃ -N	5104-5	į pH
	TIME	or NO.	CARO	OEPTH (m)	τ *c	s */	510	I-AM	ANOMA		X X	1. M.	VELO	OCITY	0 2 mi/i	µg + n1/1	μg + a1/l	ид - 01/1	yg - al/i	yg - al/	1
	HR 1/10	-					1														
	1	ı	ST	0000	0358	3316	2	639	0016	485	00	00		626							
	20)5	085	0000	0358	33159		639	001/	225	0.0	111		626							
			ST		0315 0315	3314 33143		641 641	0016	0235	00	16		609							
			08S ST	-	0310			646	0015	805	0.0	32		609							
	0.0	2	OBS		0310	33199		646						609							
			ST		0410			680	0017	2583	00	47		661							
			08s		0410 0430			680 686						672							
			085	-	0400			685					14	659							
			ST	D 0050	0229			706	0010	0135	00	069		588							
			OBS		0229 0362			706 723	000	8507	0.0	93		654							
			ST 08S		0362			723	000	0,001		. , .		654							
			ST		0610	3463	2	727	000	8261	0	114		766							
			085		0610			727		7/2/		133		+766 +813							
			ST		0708 0716			734 735	000	7636	, 0.	1 3 3		817							
			089		0716			735					14	820							
			ST	D 0150				738	000	7316	0	152		825							
			085					738	000	6460		187		4825 4803							
			ST 085					748	000	3 100		-0,		4803							
			ST					754	000	5909	0	217		4761							
			089					754						4761 4761							
			089					756 756						+ 101 4773							
			085 S1					760	000	5311	١ ٥	246		4747							
			085			3484	2 2	760						4747							
			083					2764	000			296		4765 4765							
			S1 089					2768 2768	000	4698	3 0	296		4765							
			S1					2771	000	4469	9 0	341		4778							
			085					2771						4778							
				TD 0600				2774	000	4322	2 0	385		4796 4796							
			085	S 0600 TD 0700				2774 2777	000	4129	5 0	428		4808							
			08:			7 3503	4	2777					1	4808	3						
			S	TD 0800				2779	000	4015	5 0	468		4817							
			08					2779 2779	000	405	я п	509		4817 4826							
			0B:	-				2779	000	,,,,,	• •	- 0 ,		4826							
				TD 1000		2 3501		2780	000	4079	5 0	549		4839							
			0В:					2780	0.00	402	1 0	590		4839							
			S 08:	TD 1100 S 1100				2781 2781	000	7402.	1 0	776		4850							
				TD 1200				2783	000	394	6 0	630	0 1	4860)						
			08	S 1200	038	3 3500	_	2783						4860							
				TD 1300				2783 2783	000	0402	9 0	670		4877 4877							
			08. S	S 1300				2784	000	0401	5 0	710		4890							
					'								- 1		-						
			08	S 1400				2784						4890							
				TD 150	0 036	9 3500		2784 2784 2784	000	0403	5 0	750	0 1	4905	5						

REFERENCE	SHIP	LATITU	DE	LONGITUOE	CTR	MARSOEN SQUARE	STATION TIL	M.E.	YEAR		SINAT			DEPTH	MAX.		WAVE SERVATIONS	WEA-	CLOUD	Т		NODC	1
CODE NO.	COOE	·	1/10	1/10	INDC		MO DAY HI	1/10	TEAR	CRUISE NO.		MBER		TO BOTTOM	OF S'MPL"	1	HGT PER SE	THER	TYPE AM	1	2	TATION	
31800	e Ev	4240	N	05020 W	П	150 20		18	1967	7 11P	985	6	T	2195	15	34	2 2	X 2	0 3			0008	
						WAT		IN O SPEED	- BAR	(U-	TEMP	$\overline{}$	VIS.	NO. 085.	398	CIAL					,	0000	,
						COOE	TRANS. OIR.	OR FD#CE	MET (mb	a) BULE		WET C	CODS	CEPTHS	OBSERV	ATIONS							
		1				DT	SD 36	\$08	0.0	85 050		050	6	31									
	MESSENGR TIME O	CAST NO.	CARO TYPE	DEPTH	(m)	7 °C	s */	SIGA	MA-T	SPECIFIC VE	DLUME -X107		103 103	SOF	OCITY	O 2 ml/l	PO4-P µg = 01/l	fOTAL=P µg = at/l	NO2-N µg - a1/I	NO3-N	SI O4→S µg - a1/		S
	FR 1710							-				+	-	-			1				_	1	+
			ST			0515	3330	26		00169	993	00	00		694		' '				'	,	
	218	5	085 ST	000		0515 0495	33299 3330	26 26		0016	788	00	17		694 687								
			085	001	0	0495	33299	26		0010		•	• •		687								
	003	ı	ST	D 002 002		0380	3325	26		00159	999	00	33		640								
	003	,	08S			0380 0295	33252 3326	26 26		0015	170	00	49		640 605								
			085	003		0295	33263	26	53					14	605								
			ST OBS			0290 0290	3338 33380	26 26		00142	255	00	78		608 608								
			ST	D 007	5	0232	3369	26		00114	+55	01	10		591								
			OBS			0232	33690	26						14	591								
			ST 085			0420 0420	3433 34331	27		00083	343	01	35	14:	684								
			ST	0 012	5	0483	3449	27		00078	378	01	55	14									
			085	012		0483	34486	27						14									
			08s ST	013 D 015		0501 0501	34560 3460	27 27		00072	240	01	74		727 730								
			OBS	015	0	0501	34602	27	38			-	•		730								
			ST 085	D 020 020		0501 0501	3475 34751	27		00061	85	02	8 0		740								
			085	022		0551	34889	27 27							740 766								
			OBS	023		0551	34889	27	55					14	768								
			085 ST	024 D 025		0502 0510	34829 3484	27 27		00056	94	02	30	14	749								
			085			0510	34840	27				0-	,,	14	753								
			ST			0520	3490	27		00054	16	02	65	14									
			08s	030 035		0520 0488	34900 34902	27 27						14	766 762								
			ST	D 040	0	0515	3497	27		00049	72	03	17		782								
			085	040		0515	34968	27						14									
			085 ST	043 0 050		0472 0457	34957 3496	27		00044	94	03	65	14	770 774								
			OBS	050	0	0457	34955	27	71		. , ,	0.5		14									
			OBS ST	057 D 060		0475 0447	34972 3497	27 27		00043	200	04	0.0	14									
			085	060		0447	34968	27		00043	00	04	υy	14	181 787								
			ST	D 070	0	0458	3500	27	74	00043	889	04	53	14	808								
			085 ST	070 080		0458 0450	35000 3503	27 27		00041	77	04	94	148									
			085	080		0450	35030	27		00041		04	70	148									
			ST			0420	3502	27	80	00039	964	05	36	148	326								
			OBS	090 0 100		0420 0379	35023 3497	27		00039	263	05	74	148									
			085	100	0	0379	34969	27		00039	.03	0.5	10	148									
			ST			0378	3497	27		00040	39	06	16	148	341								
			085 ST	110 D 120		0378 0375	34969 3497	27		00040	82	06	57	148									
			085	120	0	0375	34970	27		00040	. 0 2	Ų.	, ,	148									
			ST			0368	3497	27		00040	89	06	98	148	370								
			085	130 140		0368 0365	34969 3497	27		00041	35	07	30	148									
			OBS	140	0	0365	34969	27		30041		01.	77	146									
			ST			0362	3497	27	82	00041	79	07	0.6	149	902								
			085	150	U	0362	34969	27	82					149	902								

									XAM				T				
REFERENCE	HIP LATIT		= =	MARSDEN	STATION TIA	AE YEAR	ORIGINATO		DEPTH DEPTH	H OB	WAVE SERVATIONS	WEA-	CLOUD	1	S1	TATION	
	DDE LATITI		NGITUOE		MO OAY HR		CRUISE STAT		OTTOM S'MPL		HGT PER SEA	CDDE	TYPE AM	1	14	UMBER	
CODE NO.		1/10	1710								1		2 2			2222	
318008	EV 425	0 N 0 9	020 W			35 1967			284 02	34	1 2	X4	013	1	ł	0009	
				WAT	ER WI	INO BAR		VIS.		ECIAL							
				COLOR	TRANS. DIR.	OR (mb		JLB CODE	DEPTHS OBSER	VATIONS							
					-	FORCE		\rightarrow	27								
				DT	SD 36	508 09	040 0	40 3	27		4			_			
ME	SSENGR CAST	CARD		7 °C	s */	SIG MA -T	SPECIFIC VOLUME	₹ ∆ D DYN. M.	QNUO2	O2 m1/1		TOTAL-P	NO2-N	и03-и	\$104-\$1	рН	S
	TIME OF NO.	TYPE	GEPTH (m)	, ,	3 /**	SIGMA-1	ANOMALY-X107	x 10 ³	VELOCITY	0,2	yg - a1/1	1/10 · gu	μg - at/l	yg - at/1	μg - α1/i		C
110	1/10	-	1		 												
	l	6.70	0000	0835	3376	2627	0017637	0000	14826	I	1 1		1		1		
	225	STD	0000	0835	33755	2627	0011031	0000	14826								
	235	085	0005	0810	33723	2628			14817								
		STO	0010	0879	3396	2635	0016814	0017	14847								
	002	085	0010	0879	33955	2635	0010014	001	14847								
	002	085	0015	0700	33700	2642			14776								
		085	0019	0570	33500	2643			14722								
		STD	0020	0623	3359	2643	0016080	0034	14745								
		085	0025	0840	34000	2645	001000	•••	14836								
		STD	0030	0980	3432	2647	0015726	0050	14893								
		OBS	0030	0980	34318	2647			14893								
		085	0040	0880	34280	2661			14857								
		510	0050	1012	3468	2670	0013607	0079	14912								
		085	0052	1038	34760	2672			14923								
		OBS	0055	0830	34470	2683			14843								
		STD	0075	0324	3368	2683	0012300	0111	14631								
		OBS	0075	0324	33680	2683			14631								
		OBS	0077	0277	33640	2684			14610								
		OBS	0087	0130	33630	2695			14547								
		085	0095	0251	33750	2695			14603								
		STD	0100	0213	3383	2705	0010259	0139	14589								
		OBS	0100	0213	33830	2705			14589								
		OBS	0110	0330	33990	2707			14643								
		OBS	0112	0352	34020	2708			14653								
		STD	0125	0638	3444	2708	0010066	0165	14779								
		OBS	0125	0638	34440	2708			14779								
		OBS	0133	0703	34590	2711		-1	14808								
		STD		0561	3452	2725	0008537	0188	14753								
		OBS	0150	0561	34522	2725			14753								
		085	0161	0719	34839	2729			14822								
		085	0175	0711	34889	2734			14822								
		OBS	0182	0498	34620	2740			14734 14725								
		OBS	0197	0470	34578	2740	0006860	0227	14712								
		STD		0440	3457	2742	0006860	0227	14712								
		OBS	0200	0440	34570	2742			14/12								
		OBS	0210	0330	34498	2748 2749	0006202	0259									
		STD		0310	3449 34489	2749	0000202	0239	14665								
		085	0250	0310	34469	2147			1-000								

			ARSDEN	STATION TO	ME	ORIGINATO	R*5	DEPTH	MAX.		AVE SUOIT AVS	W EA -	CODES			DOC	
REFERENCE SHIP LATITUE	DE LON	GITUDE ES M	QUARE	(GMT)	YEAR	CRUISE STAT		BOTTOM	OF			CODE	TYPE AMI			MBER	
CODE NO. CODE		· 1/10 = 1	1 1 /	MO DAY H	R,1/10	NO. NUM	BER	50110111	S"MPL"S		HGT PER SE		_			010	
318008 EV 4300	N 05	020 W 1	50 30	04 04 0	10 1967	IIP 9858		0098	01	34	2 2	X 4	013	ļ	1 0	010	
318008 EV 4300	14 05	020 # 2	WAT		IND BARC	AIR TEMP.	°C VIS	NO.	SPEC	IAL							
			COLOR	TRANS. DIR.	SPEED METE	R DRY W	ET COD		OBSERVA	RIONS							
			COOF	tm1	FORCE (mbs	BULB BU	JLB										
			DT	SD 36	508 09	8 044 0	44 3	09									
						SPECIFIC VOLUME	₹ △ 0	sou	UNG	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-SI	рΗ	č
MESSENGR L CAST	CARO	DEPTH (m)	т *С	s */	SIGMA-T	ANOMALY-1107	QYN. A	VETO	OCITY	07 007	yg = 01/1	νg - α1/1	ug = 01/1	yg = a1/1	pg - 01/1		C
HR 1/10																	11
		1			1			0 16	E (1		1	1	1	,			
	STD	0000	0170	3296	2638	0016517	000	_	541								
010	085	0000	0170	32960	2638		001		541 534								
	STD	0010	0148	3299	2642	0016184	001		534								
	085	0010	0148	32985	2642	0015904	003		527								
	STO	0020	0128	3301	2645	0015884	003		527								
002	OBS	0020	0128	33008		0015750	004		525								
	STD	0030	0121	3302	2646	0015750	004		525								
	OBS	0030	0121	33020					4525								
	OBS	0035	0117	33094					4536								
	085	0037	0139	33112					4511								
	085	0040	0082	33115	2656 2667	0013750	007		4500								
	STD	0050	0051	3323 33307		0015750	501		4493								
	085	0060	0030		2677	0012789	011		4494								
	STD	0075	0025	3334 33358		0012107	J - 1		4494								
	OBS	0085	0022	22220	2017												40

$\overline{}$	ENCE	SHIP	LATITU	I OF	LONGITUDE	DCTR	MARSO		STA	TION		YEAR	,		NATOR'S		OEPTH	MAX.	OR	WAVE		WEA		LOUD			400C
CODE	ID.	COOE	*	1/10	1/10	N S	10*		MÕI		HR,1/1		, c		STATIO		BOTTO	A S'MPL"		HGT PE		COD	c	PE AM			UMBER
31	8008	B EV	4310) NI	05020 W		150						7				000		-					\top	<u> </u>		
	0000	d ra l	4310	, 14	03020 W	()	اموت	WAI		04	WINO	1		A ID TE	59 MP. ℃		0084	01	36	3 6	1	X4	- (013	1		0011
							- 1	COLOR	_	s. OIR	SPE	ED M	LRO= ETER		WET	VIS.	NO.		CIAL								
								CODE	(m)		FOR	F 1	nbsl	BULB	BUL		OEPTH!	OBJEKY	A HORS								
							1	DT	SE	19	9 50	5 0	88	033	03	3 3	07										
		MESSENGR	CAST	CARC			_	to.	Τ.	,			s	SPECIFIC VOLL	JME	₹ Δ 0 0YN. M	50	UNO		PO	_ P	TOTAL	N N	2-N	NON	5104-51	
		HR 1/10	T NO.	TYPE		m;		°C	1	*/	51	GMA-T		ANOMALY-X	107	X 10 ³	VEI	OCITY	O ₂ m1/I	ha -		μg - o1/l		- al/l	yg - a1/1	μg - αl/l	pН
			1			T					_		\perp								_						
		,	1	ST	0 000	o ˈ	03	374	32	64	' 2	596	ı	002054	+5	0000	1 14	626		1	- 1		1			J	
		02	1	085				374		2640		596						626									
				OBS				373		2639	9 2	596					14	626									
				ST				337		263		598		002032	29	0020	14	611									
		00	1	OBS				337		2626		598						611									
				ST				192		95		636		001678	34	0039		1554									
				085				192		945		636						1554									
				ST				100		04		649		001548	30	0055	14	516									
				OBS				100		3039		649					14	516									
				ST	0 005	0	00	29	33	40	2	682		001233	33	0083	14	492									
				085	005	0	00	129	33	3401	1 2	682					14	492									
				085	006	0	0.0	028	3.3	401	1 2	682					14	493									

REFERENCE SHIP CODE L	ATITUOE I	TONGITUDE 1/10	MARSOEN SQUARE	STATION TE (GMT)	YEAR	ORIGINATO	_	TO	OF	WAVE ERVATIONS	WEA- THER CODE	COOES		51	ODC ATION UMBER	
31 8008 EV 4	439 N (04909 W	WAT		INO BAR SPEED MET OR (mb	O- AIR TEMP.		0063 NO. OBS. OEPTHS	00 14 SPECIAL OBSERVATIONS	2 2	х2	0 3			0012	
			DT	SD 16	S11 03	7 020 0	20 0	05								
MESSENGR C TIME OF HR 1/10	AST CARD NO. TYPE	DEPTH (m)	τ ℃	5 */.,	SIGMA-I	SPECIFIC VOLUME	₹ △ 0 0 N. M x 10 ³	ZOUN		PO4-P 1/9 - a1/1	TOTA L=P yg + at/I	NO2-N µg - 01/l	NO3-N vg - ol/l	SI O ₄ -Si µg = at/I	рН	500
																H
11.	STE		-0072	3301	2655	0014904	0000	144	32	'	,	'				
110	085 STE	0000	-0072	33010	2655			144								
	0BS	0010	-0072 -0072	3301 33010	2655 2655	0014899	0015									
	STO		-0072	3301	2655	0014894	0030	144								
001	085	0020	-0072	33010	2655	002.074	0020	144								
	STE		-0090	3301	2656	0014828	0045									
	OBS	0030	-0090	33010	2656			1442	29							
	STE		-0097	3309	2662	0014219	0074									
	OBS	0050	-0097	33085	2662			1443	3.0							

														_			MAX										
ERE	NCE	SHIP	LATITUE) E LC	ONGITUDE 1	MARSDE	E S	TATIO	MIT NO	Ε,	/EAR	CRUIS	ORIGINA SFI S	TATIO	N.	DEPTH TO	DEPTH		WAVE ERVATIO	NS.	THER	CLOU			TATE	ION	
	IO. NO.	CODE		1/10	NOTTUDE 17/10	10"	1° MC	ים כ	AY HR.	/10		NO		UMB		BOTTON	S'MPL	*5 DIR.	HGT PER	SEA	CODE	TYPE A	MT		NUN	1858	
1 8	3008	EV	4436	N 0	4854 W	149	48 0	4 0	4 12	23 1	967	11				1280	12	18	3 2		X 2	0	3		00	13	
,				•			WATER		WIN	SPEED	BAR		AIR TEA		VIS	NO.	SPI	ECIAL									
								ANS.	DIR. I	OR FORCE	(mbi		DULB	BUI		DEPTHS	OBSER.	2 NOITAV									
							OT.	SD		522	03	7	050	0:	50 3	29											
		MESSENGR						_	. 1			SPECI	FIC VOLU	M.F.	₹ △ D DYN. M	sc	UNO		PO4-	Pf	DTA L-P	NO2-1	N NO)3-N	SI O4-Si	ρN	5
		TIME 0	LCAST	TYPE	OEPTH (m)	1 1	C	s •	'/**	SIGM	A-T	ANC	MALT-11	7	X 103		OCITY	O2 ml/l	yg - al		µg - 61∕1	ug - at	/I µB		1/10 - gu	рM	č
		HR 1/10			-	-			$\neg \neg$											\top							Ti
		1	1 }	STD	0000	05	82	337	'8 [']	266	3	် ၀၀	1418	1 ່	0000	14	727	'	'								
		123	}	OBS	0000	05		337		266							727										
				STD		05		337		266		00	1413	9	0014		727 727										
		003		OBS OBS	0010 0012	05 05		337 337		266							+727										
		003	,	STD				338		267		0.0	1317	6	0028		+719										
				OBS	0020	05	50	338		267							+719										
				STD		05		339		268	-	0.0	1261	3	0041		+710										
				OBS STO	0030	05		338		268		0.0	1133	1	0065		+695										
				085	0050			340		269			,			14	+695										
				OBS	0060			340		270				_			4670										
				STD				340		272		00	00864	2	0090		4573 4573										
				OBS OBS	0075 0080			339		277							4550										
				STD				340	-	272		0.0	0841	7	0111	1	4556										
				DBS	0100		-	339		272							4556										
				OBS	0112			340		27:		0.0	0735	7	0131		4566 4648										
				STD OBS	0125		25		342	27:		0.0	00133		0131		4648										
				STO			85	344		27		0.0	00639	6	0148	1	4636										
				OBS	0150		85	344		27							4636 4632										
				OBS	0153 0170		73 10		438 539	27							4652										
				OBS OBS	0180		03	-	538	27							4651										
				STO		0.3	37	346	51	27	56	0.0	00554	9	0178		4669										
				085	0200		37		605	27			005/3		0209		4669 4690										
				STO	0250		63	340	560 560	27		01	00543))	020		4690										
				STE			87	34		27		01	00525	8	023	2 1	4709										
				DBS	0300		87		722	27					- 30		4709										
				STO			55 55	34	86 863	27		01	00504	+8	028		4756 4756										
				0BS ST	0400		52	34		27		01	00477	71	0333		4772										
				OBS	0500	_	52		910	27		_					4772										
				ST			23	34		27		0	00438	33	037		4776										
				OBS	0600		23		931	27			00436		042		4776 4787										
				STI OBS	0700		804 804	34	933	27 27		0	00429	10	042		4787										
				STO			11	34		27		0	00438	30	046	5 1	4805										
				OBS	0800		11		939	27					_		4805										
				STO			01	34		27		0	00426	50	050	_	4817 4817										
				0BS STI	0900 0 1000		401 384	34	952 96	27		0	0041	26	055		4827										
				0BS	1000		384		955	27		J					4827										
				STI	1100	0:	383	34	96	27	80	0	0041	52	059		4843										
				085	1100		383		962	27		_	00/1	, ¬	060		4843										
				STI OBS	D 1200 1200		373 373	34	96 962	27 27		0	0041	1.7	063		4856										
				085	1250		371		962	27							4863										

CTRY ID.	SHIP	LATITU	DE I	ONGITUDE SOUTH	MARSOEN SQUARE	STATION TO	WE	YEAR	CRUISE	RIGINA	OR'S		DEPTH	Derin		WAVE ERVATIONS	WEA-	CLOUD			NODC	
	CODE		1/10	1/10 5 %	10* 1*	MO DAY H			NO.	NU	MBER	_	BOTTON	S'MPL	S DIR	HGT PER SEA	CODE	TYPE AMI			NUMBER	
3 1 8 0 0 8	EV	4434	N C	04840 W	149 48 WA		139 1	967 BARO	A I	986			2103	I		3 2	X 2	0 3	I	- 1	0014	
					COLOR	TRANS. DIR.	SPEED OR FORCE	METE!	R DF	RY LB	WET BULB	CODE	200		CIAL 'ATIONS							
					DT	SD 18	518	024	4 06	1	061	2	35									
	MESSENGR	or NO.	CARD	DEPTH (m)	7 °C	5 %.	SIGM	A-T	SPECIFIC	VOLUMI	. ×	Δ D.		UND	O2 ml/l		OTAL-P	NO ₂ -N	NO3-N	\$104~5		Š
	HR 1/10					-	-			-	,	103	***	OCITI		yg • 01/I	ا/10 - وبر	μg + αt/l	yg - a1/1	NB - 01/	-	c
	1	' I	ST		0391	3373	268		0012	2525	0	000	14	648		1	ſ	ı	١		1	11
	13	9	OBS OBS	0000	0391 0391	33725 33725	268 268							648								
	00	2	STO		0360	3372	268	3	0012	295	0	012	14	636								
	00	,	OBS OBS	0010 0011	0360 0307	33718 33718	268 268							636								
			ST(0020	0370 0370	3398 33980	270		0010	421	0	024		645								
			085	0025	0450	34140	270	7			_		14	682								
			OBS	0030	0417 0417	3418 34180	271 271		0009	381	01	034		670								
			OBS	0040	0400 0364	34320 3429	272 272		0008	8040	0	051	14	666								
			085	0050	0364	34292	272	8	0000	040	U	051		652 652								
			085 085	0060 0070	0430 0519	34460 34620	2 7 3							684 724								
			STO	0075	0528	3469	274	2	0006	799	0	070	14	730								
			085 085	0075 0090	05 28 0605	34690 34850	274 274							730 766								
			STE OBS	0100	0600 0600	3486 34862	274 274	6	0006	406	01	086	14	765								
			STO	0125	0360	3458	275		0005	897	0	102		765 667								
			0BS	0125 0135	0360 0392	34580 34640	275 275							667 683								
			STO	0150	0310	3456	275	4	0005	634	0	116	14	649								
			OBS OBS	0150 0190	0310 0329	34555 34619	275 275							649 665								
			STO	0200	0355 0355	3465 34650	275 275		0005	386	0	143	14	678								
			OBS	0225	0400	34750	276	1						678 702								
			STD OBS	0250	0455 0455	3486 34858	276 276		0004	923	0	169		731 731								
			0BS 5T0	0262	0435 0477	34855 3492	276	6		001		١	14	724								
			085	0300	0477	34915	276 276	6	0004	001	0.	194		749 749								
			ST0 085	0400	0467 0467	3493 34932	276 276		0004	672	04	241		762 762								
			STD	0500	0455	3497	277	2	0004	397	04	286	14	774								
			OBS STD	0500 060 0	0455 0419	34965 3495	277 277		0004	195	03	329		774 775								
			085 STD	0600	0419 0401	34950 3495	277 277		0004	122	0.3	271	14	775								
			0BS	0700	0401	34945	277		0004	123	0.	371		784 784								
			STD 085	0800	0395 0395	3495 34948	277 277		0004	125	04	+12		798 798								
			STD	0900	0388	3495	277	8	0004	120	04	+53	14	812								
			085 STD		0388 0384	34950 3495	277 277		0004	163	04	95		812 827								
			OBS STD	1000	0384 0389	34950 3496	277 277						14	827								
			OBS	1100	0389	34959	277	9	0004			37	14	846 846								
			STD OBS	1200 1200	0373 0373	3496 34956	278 278		0004	161	05	79		856 856								
			STD	1300	0372	3496	278	0	0004	234	06	21	14	872								
			085 STD	1300 1400	0372 0366	34956 3496	278 278		0004	236	0.6	63		872 886								
			OBS STO	1400	0366 0363	34957	278	1					14	886								
			OBS	1500	0363	3496 34958	278 278		0004	213	0 .	706		902 902								

RE	FERENCE	SHIP			mr in the	MARSO	IEN	STATION	TIME				ATOR'S		DEPTH		085	WAVE ERVATIO	NS.	WEA- THER	CLOUD		, N	ATION	
CTR	V ID.	CODE	LATITU	DE L	ONGITUDE 2001	SOUAI	- 1	MO DAY		YEAR	CRUI!	S E	STATION NUMBER		BOTTO			HGT PER		CODE	TYPE AM		N	JABER	
-	18008	FV	4431)4827 W	10		-	153	1967	11	P 98	63		3200	15	18	3 2		X2	0 3			0015	
1 -	Toooc	1 - *	1 4432		, , , , , , , , , , , , , , , , , , , ,	1	WAT		WIND	BAR			MP. °C	VIS.	NO.		CIAL			,	•		·		
						C	OLOR	TRANS DIE	- SPEE	D MET	ER	DRY BULB	WET	CODE			ATIONS								
						⊢			FOR	CE TOTAL	-	083	078	5	34	-									
							DT	50 1	52	4 00			1	-	-			T					SI O4-St		2
		MESSEN	GR CAST	CARD	DEPTH (m)	Т	℃	s °/	SIC	GMA-T	SPECI	FIC VOLU	107 D	∆ □ YN. M X 10 ³	. VE	LOCITY	O2 ml/l	PO4-	P T	OTA L-P ا/اه - وبر	NO2-N	NO3~N yg - al/l	yg - 01/1	pН	c
		HR 1/	10						-		-		_	A 10		-		+-	+						+
		1	l	STO	0000	0.0	09	3409	1 2	641	0.0	1628	13 O	000	1.	4859		1	-		1	1			1 '
		1	53	085	0000		909	3408		641	00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,, ,	, , , ,		4859									
				085	0009		887	3408		644						4852									
				STE			314	3409		656	0.0	1490)1 (016		4824 4824									
		0	06	08s	0010		728	3408 3402		656 663						4791									
				ST			720	3401		663	0.0	1418	30 0	0030	1	4789									
				085	0020		720	3401		663						4789									
				085	0023		779 730	3413 3420	-	665	0.0	129	14 0	044		4814 4797									
				511 085	0030 0030		730	3420	-	677	00	1127	(, , , 4		4797									
				085	0035		327	3446	9 2	684					1	4838									
				OBS	0040		95	3440		697			2.0			4787									
				STI	0050 0050		583 583	3426 3426		701	00	106	28 (0067		4742 4742									
				08s 08s	0060		555	3444		706						4775									
				085			734	3469		715						4810									
				ST	0075		710	3469		718	0.0	090	92 (0092		4803									
				085			710	3468		718						4803 4781									
				08S			648 710	3472 3485		729	0.0	0079	20 (0113		4809									
				085			710	3485	0 2	731		-			1	4809									
				ST	D 0125		675	3489		739	0.0	0071	94 (013		4800									
				085			675 650	3489 3489		2739 2742						4800									
				08s 08s			705	3502		745						4817									
				ST			690	3502		2747	00	0064	67	014		4811									
				085			690	3502		2747				. 1 -		4811									
				ST			573 573	3495 3495		2 7 57 2 7 57	00	0055	56	0179		4772									
				08S ST			550	3496		761	01	0052	52 (020		4771									
				085			550	3496		2761					1	4771									
				ST	D 0300		490	3497		2768	0	0045	41	023		4755									
				085			490	3497 3499		2768 27 7 2	0	0043	0.8	027		4755									
				ST OBS			447 447	3495		2772	U	V U 4 3	00	J- 1		4753									
				ST	D 0500		423	3495	- 2	2774	0	0041	78	031		4760									
				085			423	3494		2774	_	00/3	4.0	035		4760									
				ST			409 409	3494		2775 2775	0	0041	48	035		4771									
				085 ST			396	3494	_	2776	0	0041	03	040		4782									
				085			396	3494		2776					1	4782									
				ST	0080 d		384	3494		2778	0	0040	57	044		4793									
				085 ST			384 380	3494 3494		2778 2778	٥	0041	0.0	048		l4793 l4808									
				085			380	3494		2778	J	50,1	~~			4808									
				ST	D 1000	0	377	3494		2778	0	0041	53	052		4824									
				085			377	3494		2778	^	0043	0.4	056		l4824 l4839									
				ST 085			374 374	3494		2779 2779	U	0042	04	070		14839									
				ST			371	3499		2780	0	0041	80	060	7]	14855									
				085	1200	0	371	3499	0 3	2780						14855									
				ST			371	3499 3499		2780 2780	0	0042	66	064		14872 14872									
				OBS ST			371 371	349		2780	0	0043	43	069		14888									
				085			371	349		2780						14888									
				S1	TD 1500	0	1369			2782	0	0042	62	073		14905									
				085	1500	0	1369	349	70	2782						14905									

REFERENCE CTRY ID.	SHIP	LATITU	OE L	ONGITUDE 2	MARSOEN SOUARE	STATION TI	ME YEAR	ORIGINA CRUISE S	TOR'S	OEPTH D	MAX. DEPTH	WAVE	WEA- THER	CLOUD		1.	100¢ ATION	
CODE NO.	COOE	•	1/10	1/10	N 10° 1°	MO DAY H			UMBER		MPL'S DI		- CODE	TYPE AM1		N1	UMBER	
318008	B EV	4429	NIC	04813 W	149 48		171 1967	4 IB 75 I		3475	15 1	6 4 2	X4	03	1		0016	
					COLOR	TRANS. OIR	SPEED MET	ER ORY	WET COD	NO. OBS. DEPTHS OF	SPECIAL	12						
					OT	SD 17	S32 99		089 6	30		-						
	MESSENGR TIME 0	CAST	CARD	T	T			SPECIFIC VOLUE	1			20. 0						7.
	HR 1/10	NO.	TYPE	DEPTH (m)	1 10	s 1/4.	SIGMA-T	ANOMALY-X10	DYN. A X 10 ³	VELOCII		PO4-P yg - a1/1	TOTAL-P ug - at/l	NO2-N µg - ol/l	NO3~N	\$1 O4~\$i \la = 84	pН	Ċ
																		71
	171		STC OBS	0000	0929 0929	3418 34175	2645 2645	001592	2 0000) 1486 1486								
		•	STO	0010	0929	3418	2645	001594	2 0016									
	00-		OBS	0010	0929	34175	2645			1486								
	002	_	OBS ST	0015	092B 0905	34176 3418	2645 2649	001557	1 0032	1486 1486								
			OBS	0020	0905	34178	2649			1486	2							
			OBS STO	0027	0850 0950	34155 3440	2656 2659	001464	3 004	1484								
			OBS	0030	0950	34400	2659	001464	3 0047	7 1488 1488								
			088	0033	0985	34642	2672			1489								
			STC OBS	0050	0750 0750	3420 34200	2674	001321	0075									
			OBS	0070	0750	33827	2674 2692			1480								
			STO	0075	0460	3412	2705	001031	0104	1469	4							
			OBS OBS	0075 0080	0460 0736	34121 34680	2705 2714			1469 1481								
			STO		0900	3504	2717	0009305	0129									
			OBS	0100	0900	35035	2717			1488								
			STD OBS	0125 0125	0820 0820	3499 34987	2725 2725	000850	0151	1485 1485								
			STD	0150	0735	3495	2735	0007603	0171									
			OBS	0150	0735	34950	2735	000/33		1482								
			ST0 OBS	0200	0690 0690	3499 34989	2744 2744	0006778	0207	1481 1481								
			OBS	0240	0588	3490B	2752			1478	14							
			STD OBS	0250	0595 0595	3496 34955	2754 2754	000586	0239									
			STC		0536	3494	2760	0005333	0267	1478 1477								
			OBS	0300	0536	34937	2760			1477	3							
			STD OBS	0400	0465 0465	3492 34920	2767 2 7 67	0004738	0317	1476 1476								
			STD		0434	3493	2771	0004422	0363									
			OBS	0500	0434	34929	2771			1476								
			STD	0600	0421 0421	3493 34930	2 7 73 2773	000436	0407	1477 1477								
			STD		0401	3493	2775	0004234	0450									
			085	0700	0401	34930	2775			1478								
			STD	0800	0394 0394	3493 34930	2 7 76 2776	000424	0492	1479 1479								
			STD	0900	0386	3493	2777	0004245	0534									
			OBS STD	0900	0386	34930 3494	2777	000/10/	0577	1481								
			OBS	1000	0379 0379	3494	2778 2778	0004184	0577	1482 1482								
			STD	1100	0375	3494	2779	0004224	0619	1484	0							
			OBS STD	1100	0375 0374	34939 3494	2779 2779	000420	0663	1484								
			OBS	1200	0374	34940	2779	0004291	0661	1485 1485								
			STD	1300	0375	3494	2779	0004375	0705	1487	3							
			OBS STD	1300	0375 0373	34942 3496	2779	0006330	07/8	1487								
			OBS	1400	0373	34955	2780 2780	0004339	0748	1488								
			STD	1500	0365	3496	2781	0004262	0791	1490	3							
			OBS	1500	0365	34963	2781			1490	13							

RENCE				Ls	MAR	SDEN	STAT	ION TIA	A E			ORIGINA	TOR	' S	pi	EPTH MAN		WAVE		WEA-	CLOUD	Τ	-	NODC	
ID.	CDDE	LATITU	DE L	ONGITUDE NOCE	30 U	I ARE		GMT)		YEAR	CRUI	SE S'	ATIC UM8		7	TO DEPT	000	HGT PER		HER	TYPE AM		2	TATION	
8008	EV	4426		4759 W	149	1				967	+				36	58 15				X4	0 3			0017	
10000			11 0	. () , , ,		WA			ND SPEED	BAR	D+ _	AIR TEN	(P. *C	VI	- N	(O. SP	ECIAL	, , , , ,	,	^ +	. 0 5		,	0011	
						COLOR	TRANS.	DIR,	DR FORGE	(mbs	ER s1	DRY BULB	BUI	T CD	DE	PTHS OBSER	ZHOITAV								
						DT	SD	16	532	98	3	089	0.8	9 4	3	31									
	MESSENGR TIME 0	CAST	CARD	DEPTH (m)	1	°c	s	٠/	SIGM	A-T	SPECI	IFIC VOLUS	ĄE	₹ △ ! DYN. x 10	D	SDUND	0 2 ml/l	PO4-P	101		NO2-N	NO ₃ ~N	SLO4-S	рН	S
	HR 1/10	NU.	TYPE		-		↓					J	4	x 10	3	VELUCITY	-	yg = e1/1	NG .	67/1	μg - at/l	µg ≈ 01/1	/to - gu	<u> </u>	- C
			STD	0000	1	882	34	16	265	5.1	0.0	1530	. !	000	0	14849		1	1	- 1				I	1
	186)	085	0000	C	882	34	162	265	51						14849									
			STO	0010)851)851	34	17 170	265		0.0	1480	4	001	5	14840									
			STO			470	33		26		0.0	1277	1	002	9	14685									
	003	3	085	0020		470		800	26							14685									
			08S ST0	0025)320)270	33	635 78	268		0.0	1103	4	004	1	14620									
			085	0030	(270	33	783	269	96						14602									
			STO	0050		260	33	92 920	27(00	0992	8	006	2	14602									
			085	0060		339		110	27							14641									
			OBS	0070		500		386	272		0.0		_	000	-	14713									
			STC OBS	0075		0530 0530	34	45 450	277		00	00861	В	008	5	14727									
			STO	0100	(621	34	72	273	33	00	0769	7	010	5	14772									
			08s 08s	0100 0110		0621		724 755	273							14772									
			085	0120		628		820	274							14779									
			STO			0611		82	274		00	0687	7	012	4	14773									
			08S	0132		0597 0610	34	825 88	274		0.0	00648	3	014	0	14769 14778									
			085	0150	(0610	34	878	27	46						14778									
			ST0	0200		0574	34	91 912	27!		00	0585	1	017	1	14772									
			085	0240		0530		930	27							14761									
			STO			0540		95	270		00	00525	7	019	9	14767									
			08S ST0	0250		0540		945 97	270		0.0	00493	2	022	4	14767									
			OBS	0300	(0520	34	965	27	65						14767									
			085 ST	0350		0475		947 96	27		0.0	00455	9	047	2	14757									
			085	0400		0472		955	27			50455	,	0-1	-	14764									
			STI			0450	34	97 973	27		0 (00427	9	031	6	14772									
			OBS STI	0500		0456		02	27		00	00412	3	035	8	14772									
			085	0600		0456		018	27				0	0.2.0	^	14791									
			510 085	0700		0423		995	27		0 (00400	8	039	9	14794									
			STO	0800	(0410	35	00	27	79	00	00395	3	043	8	14805									
			08s ST	0800		0410		995 98	27		0.0	00399	2	047	Я	14805 14816									
			085	0900		3396		980	27		0(00097	7	0 - 1	J	14816									
			STI			0389		98	271		0 (00400	2	051	8	14829									
			085 STI	1000		0389		980	27		0.0	00401	9	055	8	14829									
			OBS	1100	(0383	34	980	27	81						14843									
			STI			0378		98	27		0 (00406	1	059	9	14858									
			08S	1200		0378		978	27 27		0.0	00406	0	063	9	14858									
			OBS	1300		0371	34	978	27	82						14872									
			STI 085	1400		0367 0367		98	27		0.0	00409	4	068	0	14887									
			ST			0363	34	98	27		00	00411	9	072	21	14902									
			085	1500	-	0363	34	979	27	83						14902									

REFERENCE SHIP LATITU	DE LON	IGITUDE ADUTION	MARS DEN SQUARE	STATION TIA	AE YEAR	ORIGINA CRUISE ST	ATDR'S	DEPTH	MAX. DEPTH OF	WAVE SERVATIONS	WEA-	CLOUD			NODC	
CODE ND. CODE	1/10	· '1/10 0 %	10' 1'	MO DAY HR	.1/10		UMBER	BOTTOM S	OF DIA	HGT PER SE	CODE	TYPE AMI		i	UMBER	
318008 EV 4422	N 04	739 W			06 1967			3749	15 17	5 2	Х6	0 3			0018	
			COLOR	TRANS. DID	SPEED MET	ER DRY	WET CODE	NO. OBS.	SPECIAL BSERVATIONS							
			CODE	(m)	OR (mb		BULB	DEFINS								
			DT	SD 17	530 98	3 090	090 4	26		L,						
MESSENGR CAST	CARD TYPE	DEPTH (m)	T *C	s */	SIGMA-T	SPECIFIC VOLUM	ME DYN. M x 103	. VELOC		PD4-P	TOTAL-P ug - at/l	NO2-N ug - at/1	NO ₃ -N µg = at/l	SI D4-S pg - ol/		S.C.
HR 1/10							X 10	+		1		-			1	+
1	STD	0000	0597	3361	2648	001560	ວ່ ວວວວ	147	31	1	'			'	'	1 '
206	OBS	0000	0597	33609	2648			147								
	STO OBS	0010	0595 0595	3361 33609	2648 2648	001558	9 0016	147								
	STD	0020	0440	3360	2665	001396	4 0030									
002	085	0020	0440 0360	33600 3375	2665	001307	8 0043	146								
	STD OBS	0030	0360	33750	2685 2685	001206	8 0043	146								
	STO	0050	0182	3383	2707	001001	1 0065	145	67							
	OBS STD	0050 0075	0182 0330	33830 3420	2707 2724	000843	5 0089	145								
	085	0075	0330	34200	2724	000043.	, 000,	146								
	OBS	0085	0444	34370	2726			146								
	085 STD	0089 0100	0385 0575	34330 3469	2729 2736	000736	3 0108	146								
	085	0100	0575	34693	2736	000130	0-00	147								
	STD	0125	0595	3481	2743	000676	8 0126									
	OBS STD	0125 0150	0595 0588	34810 3487	2743 2749	000627	6 0142	147								
	085	0150	0588	34869	2749			147	69							
	STD	0200 0200	0547 0547	3493 34930	2758 2758	000538	9 0171	147								
	OBS STD	0250	0521	3495	2763	000499	3 0197									
	085	0250	0521	34950	2763			147								
	STD 085	0300	0508 0508	3496 34963	2766 2766	000480	4 0222	147								
	STD	0400	0477	3498	2771	000440	8 0268									
	085	0400	0477	34983	2771			147	66							
	STD OBS	0500 0500	0453 0453	3498 34983	2774 2774	000423	9 0311	147								
	STD	0600	0438	3500	2777	000403	7 0353									
	085	0600	0438	35001	2777	000400	1 0300	147								
	STD 085	0700 0700	0432 0432	3501 35010	2778 2778	000400	3 0393	147								
	STD	0800	0407	3501	2781	000381	4 0432	148	04							
	085	0800 0900	0407 0395	35009 3500	2781	000381	0 0470	148								
	STD 085	0900	0395	35002	2781 2781	000381	9 0470	148								
	STD	1000	0385	3500	2782	000381	3 0508	148	28							
	OBS	1000	0385	34999	2782	000300	. 05.7	148								
	5TD 085	1100	0378 0378	3499 34990	2782 2782	000388	4 0547	148								
	STD	1200	0373	3499	2782	000394	7 0586	148	56							
	OBS STD	1200 1300	0373 0369	34985 3499	2782 2783	000398	3 0625	148								
	085	1300	0369	34985	2783	000398	0025	148								
	STD	1400	0366	3499	2783	000403	0 0666	148	87							
	085 ST0	1400 1500	0366 0361	34985 3499	2783 2784	000404	9 0706	148								
	OBS	1500	0361	34985	2784	000404	, 0,00	149								

REFERENCE	SHIP			# H	MARSDEN	STATION TI	M.E		0	RIGINA	TOR'S		DEFTH	MAX,		WAVE	WEA-	CLOUG			HODC	
CTRY ID.	COOE	LATITU	1/10 LOF	FILTUDE S	SOUARE 10° 1°	MO DAY H		YEAR	CRUISE NO.	STA	ATION		TO BOTTOM	OF S'MPL'S		ERVATIONS	THER	TYPE AM		S1	UMBER	
	0 511	4410						10/7	-			-					+			_		
31 800	8 EV	4418	N U4	7185W	149 47 WAT		28	1967	-	986		$\overline{}$	3840	15		3 2	X6	0 3	1	- 1	0019	
					COLOR	TRANS. OIR.	SPEED	- BARC METE	R 0	RY	WET	VIS.	NO. OBS.	OBSERV	ATIONS							
						im)	FORCE	(mbs		-	BULB	_	DEPTHS									
					DT	SD 28	530	00	3 0	51	061	5	31						_			
	MESSENGR TIME C	CAST	CARO	GEPTH (m)	T 10	s */**	SIGA	T-AN	SPECIFIC	VOLUM	E ∑	△ D N. M. 10 ³	sou	JND	O2 ml/l	PO4-P	TOTA L-P	NO2-N	NO ₃ -N	SI Q4-Si	ρН	s.
	HR 1/10	NO.	TYPE			' ''	310.		ANDMA	.LY_X10'	x	103	, AETO	OCITY	02	μg = et/l	yg - a1/1	µg - 01/1	μg - ol/l	μg - 01/l	Į, n	č
								Ì														
	1		STD	0000	1000	3428	26		0016	266	00	000	14	895								
	228	3	OBS	0000	1000	34280	26				_			895								
			STD OBS	0010	1004 1004	3429 34288	26 26		0016	5292	00	016		898 898								
			STD	0020	1062	3463	26		0014	4739	0.0	32		925								
	003	3	OBS	0020	1062	34631	26		001	,	٠,	, , _		925								
			STD	0030	1187	3493	26	57	0014	4781	0()47		974								
			OBS	0030	1187	34925	26							974								
			085	0038 0050	1248	35218 3522	26		001	1626	0.4	. 7.0		000								
			STD	0050	1240 1240	35222	26 26		001.	3624	Ü	75		9 9 9 999								
			STD	0075	1224	3522	26		001	3435	0	109		998								
			OBS	0075	1224	35216	26							998								
			085	0090	1226	35238	26							001								
			STD	0100	1246	3530	26		001	3295	0	142		011								
			085	0100	1246	35300	26		001	11//		1 7 6		011								
			ST0 0BS	0125 0125	1274 1274	3540 35399	26 26		001.	3166	0.	175		025 025								
			OBS	0138	1277	35434	26							029								
			STD	0150	1251	3546	26		001	2348	0.	207		023								
			OBS	0150	1251	35460	26							023								
			OBS	0170	1235	35509	26							021								
			STO	0200 0200	1135	3541	27		0010	701	0.	265		990								
			OBS STD	0250	1135 0981	35410 3524	27 27		000	9406	0.	315		990 941								
			OBS	0250	0981	35240	27		000	,400	•			941								
			STD	0300	0863	3513	27		0000	8411	0	360		904								
			OBS	0300	0863	35132	27						14	904								
			STD	0400	0697	3505	27		0000	5758	04	+35		856								
			OBS STD	0400 0500	0697 0521	35048 3494	27		000	5274	0.4	496		856 800								
			OBS	0500	0521	34940	27		000.	,,,,	0.	*70		800								
			OBS	0560	0495	34940	27							800								
			085	0571	0553	35108	27						14	027								
			STD	0600	0500	3500	27		0004	4028	0	547		809								
			OBS OBS	0600 0618	0500 0476	34995 34981	27 27							809 802								
			STD	0700	0476	3504	27		000	4588	0.5	594		825								
			OBS	0700	0498	35040	27		000	0 0	0.	, ,		825								
			STO	0800	0478	3505	27	76	000	4414	0.	539		834								
			OBS	0080	0478	35045	27							834								
			STO	0900	0450	3504		78	000	4231	0	682		839								
			OBS STD	0900 1000	0450 0437	35037 3503	27	78 79	000	4238	0	725		839 850								
			OBS	1000	0437	35028	27		000	0				850								
			STO	1100	0402	3500	27		000	4105	0	767		852								
			OBS	1100	0402	35000	27							852								
			STD	1200	0392	3499	27		000	4139	0	808		864								
			08S STD	1200 1300	0392 0388	34991 3499	27 27		000	4186		849		864 879								
			085	1300	0388	34990	27		000	-100	0.	-47		879								
			STD	1400	0365	3497	27		000	4164	0.	891		886								
			OBS	1400	0365	34965	27							886								
			STD	1500	0368	3497		82	000	4235	0	933		904								
			OBS	1500	0368	34972	27	82					14	904								

RENCE	SHIP	LATITU	IDE	LONG	INDUTE BOUTE	SRAM UO2	DEN ARE	TAT2	ION TIN	4E Y	EAR	CRUI	ORIGINA	TOR'S ATION		OEPTH TO	DEPTH		WAVE ERVATION:	;	WEA- THER	CLOUD		ST.	ODC	
ID. NO.	CODE	*	1/10		'1/10 G Z	10*	1°	40 C	DAY HR	.1/10		NO		JMBER		BOTTON	S'MPL	S DIR.	HGT FER	EA (BODE	TYPE AMT		NL	MBER	
18008	ΕV	441	9 N (046	48 W	149					967	11			;	3840	15	25	3 2		x1	0 3	1		020	
							COLOR			SPEED OR	BARO		ORY TEM	P. °C	VIS.	NO.		CIAL VATIONS								
							CODE	TRANS.	DIR.	FORCE	(mbs)		BULB	BULB	-	DEPTHS	OBSER	7 110113								
							DT	SD	27	510	26	1	030	030	6	30	<u></u>									
-	MESSENGR TIME	CAST	CARD		DEPTH (m)	T	°c	s	٠/	SIGMA	T-4	SPECI	FIC VOLUM	E 2	A D		UND	O ₂ m1/l	PO4-P		A L-P	NO ₂ -N	NO3-N	5104-51	ρН	S
	HR 1/10	NO.	TYPE									Anc		-	x 10 ³	VEL	OCITY .		yg - a1/l	יפע	+ st/1	μg - at/l	ug = at/1	µg - ot/l		+
				_		١.		0.5	0.0	2.0	_		10050			1	 +969				- 1		I	1		1
	06	(,	ST1 OBS		0000		169	35	39 390	269 269		00	10959	, (0000		969									
	00.	*	ST		0010	1	169	35		269		0.0	10992	2 (0011	14	+971									
			OBS		0010		169		389	269							971									
	00	7	ST OBS		0020		169	35	389	269 269		00	1101	5 (0022		+972 +972									
	00	'	OBS		0025		169		389	269							4973									
			ST	D	0030		168	35		269		00	1102	5 (0033		+973									
			OBS ST		0030		168	35 35	389	269 269		0.0	1109	3 (055		4973 4977									
			OBS		0050		169		389	269		•	, , .	•	,		4977									
			ST		0075		169	35		269		00	1115	7 (0083		4981									
			OBS ST		0075 0100		169	35	389	269 269		0.0	11220) (111		4981									
			OBS		0100		169		389	269			,	•			4985									
			ST	D	0125		170	35		269		00	1130	1 (139		4990									
			OBS		0125 0150		170	35 35	389	269		0.0	1134	5 (167		4990 4993									
			ST QBS		0150		169		389	269		00)1154	,	, 201		4993									
			ST		0200)	181		42	269	7	00	1146	3 (224		5006									
			OBS		0200 0250		181		420	269		0.0	01161	2 1	282		5006									
			ST OBS		0250		1200		465	269		00	71101		J-02		5022									
			OBS		0280		1199		465	269							5026									
			ST		0300		l183		442	269		00	01159	1 (340		5024 5024									
			08S 0BS		0300 0340		1087		383	271	-						4996									
			OBS		0352		1097		415	271							5002									
			ST		0400		903		21	272		0.0	00870	3	0442		4936 4936									
			085 ST		0500		708		06	274		00	00699	4	0520		4877									
			OBS	5	0500		708		059	274							4877									
			ST OBS		0600 0600		0602		03	275		0.0	00592	3	0585		4851 4851									
			ST		0700		0532		03	276	-	01	00511	7	0640		4839									
			OBS	5	0700	(0532	35	027	276	8					1	4839									
			ST OBS		0800)477)477		02	277		01	00457	1	0688		4833 4833									
			ST		0900		0438		01	27		0	00425	2	0732		4833									
			OBS	5	0900		0438		014	27							4833									
			OBS OBS		0940 0965		0428		998	277							4836 4853									
			ST		1000		0458		05	27		0	00432	7	0775		4859									
			OBS	5	1000		0458		052	27					- 0		4859									
			ST		1100 1100		0440		050	278		0	00421	6	0818		4868 4868									
			085 ST		1200		0440		03	278		0	00419	0	0860		4877									
			085		1200	(0421	35	034	278	3 1					1	4877									
			ST		1300		0408		03	271		0	00418	5	0902		4888 4888									
			0BS		1300 1400		0408		502	271		0	00415	5	0944		4901									
			OBS	S	1400	(0398	35	5024	271	3			_	- 0 -		4901									
			ST		1500		0394		502	278		0	00421	5	0985		4916 4916									
			OBS	5	1500		0394	25	5021	278	3 3					1	-310									

_							45.400.00				ORIGINA	2°9 (7) A		DEPTI	MAX.		WAVE	WEA-	CLDUD	Г	- T.,	IDDC	7
CTRY	ID.	CDDE	LATITU	i	NGITUDE STORY	MARSDEN	STATION TO		YEAR	CRUISE ND.	\$	TATION	_	TD	DEFII	DBS	ERVATIONS	THER	TYPE AM		S1 N	NDDC ATIDN UMBER	
COD	18008	-	4411	1/10 N 0.4	1/10 = 608 W		04 06		1967	1		_	\neg	387			3 2	×1	0 3			0021	
1 -	1,000	4 - * !				WAI	rer v	/IND	BAR	0- 4	AIR TEA		VIS.	NO.	SPE	CIAL							
						CDLDR	TRANS. DIR.	FOR	CE (mb	s) B	ULB	SULB	-	DEPTH	12 00354	Allons							
						DT	SD 26	51	4 27		72	067		38			1			AUD N	00.0		s
		MESSENGR TIME HR 1/10	CAST ND.	CARD TYPE	DEPTH (m)	T °C	s */.	SIC	GMA-T	SPECIFIC	ALY-X1	ME D	∆ D YN. M x 10 ³	. \ \	ELOCITY	D 2 m1/1	PD4~P v0 - 01/1	101AL-P pg - al/l	ND 2-N	ND3-N µg - al/l	\$1 04-\$1 /10 - 84	рН	c
		FIR 1710																					
		10	2	STD OBS	0000	0814 0814	3437 34367		678 678	001	278	7 0	0000		4826 4826								
		20		STD	0010	0817 0817	3438 34375		678 678	001	278	8 (0013		4829								
				OBS STD	0010 0020	0822	3439	2	678	001	280	4 (026	1	4833								
		00	5	OBS OBS	0020 0025	0822 0830	34385 34400		678 678						4833								
				STD	0030	0835	3441	2	678	001	279	5 (0038		4840								
				OBS STD	0030 0050	0835 0846	34414 3444		678 678	001	1283	8 (0064	4 1	4848								
				OBS STD	0050 0075	0846 0788	34435 3445		678	001	1193	2 (0095		4848								
				085	0075	0788	34450	2	688	, , ,				1	4830								
				OBS OBS	0085 0094	0799 0711	34490 34365		690					- 1	14802								
				STD OBS	0100 0100	0759 0759	3449 34490		695	001	1126	9 1	0124		L4823 L4823								
				OBS	0105	0730	34448	2	696				0151	1	4812								
				STD OBS	0125 0125	0787 0787	3456 34555		696	00.	1122	(5)	0152	1	14839								
				STD	0150 0150	0865 0865	3473 34732		698	00	1110)9	0180	-	14875 14875								
				085 085	0154	0824	34800	2	710					1	14861								
				08s 08s	0170	0850 0770	34920 34800		2715 2718					:	14875								
				OBS STD	0190 0200	0864 0786	35000 3490		2720 2724	001	0878	35	023		14885								
				OBS	0200	0786	34900	2	2724			-		:	14855								
				0BS 0BS	0220 0237	0686 0809	34795 35055		2730 2732						14818 14872								
				STD	0250	0750 0750	3496 34958		2734 2734	00	0792	25	027		14850 14850								
				08s 08s	0284	0670	34940) ;	2743				- 2 -		14825								
				5 T D 0 B S	0300	0671 0671	3495 3495		2744 2744	00	0699	53	030		14828 14828								
				OBS	0310	0659 0708			2746 2749						14825 14848								
				0 8 \$ \$10		0653	3510		2758	00	0579	51	037	2	14839								
				08s 08s	0400 0450	0653 0536			2758 2764						14839 14799								
				STE	0500	0525	3499		2766 2 7 66	00	050	70	042	-	14803 14803								
				085 ST2		0525 0479	3499		2771	00	046	23	047	5	14800								
				0BS ST0	0600	0479 0458			2771 2775	00	043	15	051		14800 14808								
				OBS	0700	0458	3501	0	2775	00	042	6.8	056		14808 14814								
				ST0 085	0000	0432 0432	3498	3	2776 27 7 6					-	14814								
				ST0 0B5	0900	0423 0423			27 78 27 7 8	00	042	0.8	060	15	14827 14827								
				STO	1000	0432	3502		2779	00	042	12	064	7	14848								
				08S 510	1000	0432 0418	3503		2779 2781	00	040	84	068		14859)							
				OBS ST	1100	0418			2781 2782	0.0	040	69	072		14859								
				OBS	1200	0404	3502	1	2782						14870)							
				ST0 0 B S		0395			2782 2782		041		077		14882								
				ST	1400	0387	7 3501		2783 2783	0.0	041	01	081	11	14896								
				0 B S STI		0387	7 3501		2784	00	040	66	085	52	14908	3							
				085		0377	7 3501	1	2784						14908	5							

	TUDE LO	MOITUOE ROUTIDA	MARSDEN SOUARE	STATION T (GMT)	IME	YEAR	CRUISE	RIGINA ST.	TOR*S ATION		OEPTH TO	MAX, DEPTH OF	082	WAVE ERVATIONS	WEA- THER	CLOUG		N ST	OOC	
CODE NO.	1/10	1/10 =	10° 1°	MO OAY H			NO.		J M 8 E R	-	401108	S'MPL"		HGT PER SE		TYPE A MT		_	JMBER	
31 8008 EV 440	3 N 04	1529 W	149 45 WA		ONIV	1967	A	987		VIS.	4316 NO.	SPE	31	2 3	X1	013	1	1 (0022	
			COLOR	TRANS. OIR.	SPEED OR FORCE	M ETE (mba		RY JLB	W ET BULB	CODE	OBS. OEPTHS	OBSERV	ATIONS							
			DT	SD 26	506	28	4 0	67	067	7	36									
MESSENGR CAS	CARD TYPE	DEPTH (m)	ī °C	s */.,	SIGN	7-A	SPECIFIC	VOLUM	E SY	△ 0 N. M 10 ³	. SO	OCITY	O 2 ml/l	PO4-P μg - α1/1	101AL-P pg - o1/l	NO2~N ug = at/l	NO3-N µg - o1/1	Si O4-Si ug - al/l	рН	C.
HR 1/10									- -^	. 10										\dagger
131	STD OBS	0000	0751 0751	3407 34069	26 26		001	4126	00	000		798 798								
131	STD	0010	0746	3407	26	64	001	4074	00	014	14	798								
	OBS STD	0010 0020	0746 0746	34069 3407	26 26		001	4090	0 (028		798								
005	OBS	0020	0746 0745	34069 3407	26 26		001	4092	0/	042		800								
	OBS	0030	0745	34069	26	64					14	801								
	STD OBS	0050 0050	0746 0746	3408 34078	26		001	4071	. 00	070		805								
	OBS OBS	0063 0070	0747 0773	34115 34395	26 26	68					14	808								
	STD	0075	0766	3439	26	87	001	2038	0	103	14	821								
	08s 08s	0075 0080	0766 0749	34394 34370	26 26							821								
	STD OBS	0100	0825 0825	3464 34642	26 26	98	001	1086	0	132	14	851								
	085	0103	0828	34680	27							851 853								
	OBS STD	0110 0125	0766 0731	34633 3468	27 27		000	9549	0	158		829								
	OBS	0125	0731	34675	27	14	•••	,,,,		- , ,	14	819								
	085 085	0130 0140	0802 0781	34907 34905	27 27							850								
	STD OBS	0150 0150	0733 0733	3482 34820	27 27		000	8541	. 0	180		826								
	OBS	0174	0661	34796	27	33					14	801								
	STD 085	0200 0200	0674 0674	3485 34845	27 27		000	7633	3 0	221		811								
	08S STD	0227 0250	0673 0600	34928 3489	27 27		000	6387	, 0	256		790								
	OBS	0250	0600	34893	27	49					14	790								
	085 510	0265 0300	0573 0609	34870 3494	27 27		000	6208	0.	287		782 803								
	OBS STD	0300 0400	0609 0572	34942 3504	27 27		000	5130	n n	344		803								
	OBS	0400	0572	35042	27	64	000				14	806								
	08S STD	0450 0500	0575 0540	35087 3508	27 27		000	4575	0:	393		816								
	OBS OBS	0500 0550	0540 0494	35080 35041	27 27							810								
	STD	0600	0493	3504	27	74	000	4393	04	437	14	807								
	OBS ST D	0600 0700	0493 0448	35042 3503	27 27		000	4061	. 0	480		807 805								
	OBS STD	0700 0800	0448 0421	35028 3500	27 27		000	4047	, o	520		805								
	085	0800	0421	35000	27	79					14	810								
	STD OBS	0900 0900	0420	3502 35015	27		000	4024	0:	61		826								
	STD OBS	1000 1000	0415 0415	3502 35016	27	80	000	4053	06	501	14	841								
	STD	1100	0401	3502	27	82	000	3975	0	641	14	851								
	OBS ST D	1100 1200	0401 0387	35016 3500	27		000	3988	0.0	581		851								
	OBS STD	1200 1300	0387 0382	35003 3500		82		4037		721	14	862 877								
	OBS	1300	0382	35000	27	83					14	877								
	STD OBS	1400 1400	0373 03 7 3	3500 34998	27		000	4024	0.	761		890								
	STD	1500	0369	3500	27	84	000	4057	01	802	14	905								
	OBS	1500	0369	34998	27	84					14	905								

	IO.	SHIP		TUOF		ITUOE	DRUFT	ZRAM UDZ		ATZ	TION	TIME	YEAR		JISE	VATOR'S	1	OEPTI TO BOTTO	. oi	н	WA\ BSERVA	TIONS	WEA- THER COOE	CC	000		5	NODC TATION IUMBER
3000	NO.		•	1/10 574N 0		1/10	\rightarrow	10°		MO	OAY	HR,1/10		1	10.	NUMBE	R	80110	M S'MP			PER SEA	`	TYPE	AMT	_	_	
318	008	EV	465	74N	047	58 W		149		04	07		1967	1		371		016	6 0	1 32	2 4 1	2	X1	1 0	13	l	1	0023
								ļ	WA'	TER	+	SPEED	BAR			MP. °C	VIS.	NO. OBS.		PECIAL								
									COLOR	TRAN'	S. OIR	- DR FORCE	(mb		DRY BULB	BULE	COO	OEPTH		RVATION	2							
								ł	DT	SC	32	_	15	_	000	-01	1 7	12	1		1							
		_	_							1	1 36	- 320	1 4 2	1		1	ξ Δ o	1		т				Τ.	7			$\overline{}$
		MESSENG	OF NO. TYP		OEPTH	(m.)	т	°C	1	/	51G/	I-AN		CIFIC VOL		DYN. A		LOCITY	0 2 m		04-P - at/l	10TAL-P			NO3-N	\$1 O 4 \$i yg = 01/1		
		HR 1/10		NO. TYPE	,,,			1		1				<u> </u>		_	x 103	1.		-	-						7.	-
			108 0									ļ		!										1				1
						000			088		293	26		0	0154	49	0000		4423									
		10		OE		000			088		932			^	0756		0016		4423									
				STD	001			088		293	26		Ų	0154	43	0019		4425										
					STD	001			088 086		2932 293	2 26 26		0	0154		0031		4425 4428									
		0.0				002			086		2932			0	0154	+ +	003		4420 4428									
		00			5TD	003			085		294		50	0	0154	1 9	0046		4430									
		002	O.E		003			085		939			_	0	. ,	00 10		4430										
					STD	005			084		296	26		0	0152	35	007		4434									
				OE		005			084	3.2	2958	3 26	52					1	4434									
				OE	35	005	5	-0	084	32	2990	0 26	54					1	4435									
				O E	3.5	006	0	-0	091	33	3043	3 26	59					1	4433									
				Q E	35	006	5	-0	068	3.3	3082	2 26	61					1	4446									
				5	STD	007	5	-0	069	33	808	26	61	0	0143	27	0114	4 1	4447									
				O E		007	_		069		3082		61						4447									
				0.6	-	009			085		310:		63						4442									
				-	STD	010			076		312		64	C	0140	06	0149		4448									
				35	010			076		3119		64						4448										
			06	35	011	.5	-0	065	3:	3150	0 26	66					1	4456	1									

	3 18008 EV 46	LATITU	O.F	TONGITUDE PARTY	MARSOEN	STATION TIN	YEAR	ORIGINATO		OEPTH OEPTI	3.1	WAVE ERVATIONS	WEA-	CLOUD			NODC
			1/10	1/10		MO OAY HR		CRUISE STAT		BOTTOM S'MPL	'S DIR	HGT PER SE	CODE	TYPE AM	1		UMBER
31800		4667		047415W			23 1967	11P 9872		0183 02		3 2	×1	0 3			0024
1 2 1000		1 4001	474	04141241	WA		NO.	A ID TCAAD	°C			13 12 1	1 1	1 0 . 3	1	'	00241
					COLOR		SPEED MET	ER ORY W	ET COOR	DOF SP	ECIAL VATIONS						
					CODE	tm1	FORCE (mbs	BULB BU	11.8	OEFIRS							
					DT	SD 31	513 18	3 -022 -0	28 7	18							
		CAST	CARO		7 %	s */	SIGMA=T	SPECIFIC VOLUME	₹ ∆ D OYN. M.	ZOUND	O 2 ml/l	PO4-P	TOTAL-P	NO3-N	NO3-N	SI 04-S1	pН
	HR 1/1	of NO.	TYPE	OEFTIN BIN			3,0///2-1	ANDMALY_X107	x 10 ³	VELOCITY	0 2,	1/10 - gu	N0 + 01/I	1/10 - gu	μg - at/1	µg = at/l	911
		ı	ST	D 0000	-0118	3294	2651	0015305	0000	14409		'					
		23	OBS	0000	-0118	32939	2651			14409							
			ST		-0118	3294	2651	0015298	0015								
			085		-0118	32939	2651			14411							
			ST		-0118	3294	2651	0015292	0031	14413							
)2	085 ST		-0118 -0118	32939 3294	2651 2651	0015285	0046								
			0Bs		-0118	32939	2651	0017207	0040	14414							
			085		-0149	32980	2655			14401							
			OBS		-0149	33071	2663			14404							
			ST		-0145	3308	2663	0014131	0075	14407							
			OBS		-0145	33078	2663			14407							
			085		-0140	33088	2664			14410							
			085		-0113	33170	2670	0012/05	0110	14425							
			ST		-0115 -0115	3317 33170	2670	0013495	0110	14427							
			08s		-0111	33209	2670 2673			14427							
			ST		-0051	3337	2684	0012194	0142								
			085		-0051	33369	2684			14463							
			OBS		-0027	33340	2680			14475							
			OBS		-0089	33339	2683			14448							
			ST		0012	3350	2691	0011479	0172								
			OBS		0012	33500	2691			14498							
			OBS		0068	33620	2698	0010860	0199	14528							
			ST		0072 0072	3363 33626	2698 2698	0010850	0199	14531							
			085 085		0072	33630	2698			14537							

REFERENCE SHIP LATITU	0.5	AGITUDE ES SC	RSOEN	STATION TIM	YEAR		SINATOR		OEPTH	MAX. CEPTH	000	WAVE		WEA- THER	CLOUG			NOOC	
CODE NO. CODE	1/10	GITUDE SO		MO DAY HR.	1	CRUISE NO.	STATIO	ON BER	BOTTOM	OF S'MPL'S		HGT PE			TYPE AM			TATION	
318008 EV 4657		728 W 14	-	04 07 13		IIP 9	9873		0216	02	32					1			
1 2100000 54 1 4021	4N U4	120 MI 114	WA			A 10	TEMP. 9		0216 NO.			3 2	ı	X1	0 3	1	1	0025	.1
			COLOR	TRANS. OIS	SPEED MET	ER ORY		T COD	Onr I	SPEC									
			COOE		ORCE (mb)		-	-	-		-								
			DT	SD 31 S	08 19	3 -022	2 -02	28 7	21										
MESSENGE CAST	CARD	OEPTH (m)	т °С	s •/	SIG M A - I	SPECIFIC VO	OLUME	∑ ∆ a	SOL		O 2 m1/I	PO4		TOTA L-P	NO2-N	NO3-N	51 O4 - Si	ρН	S
HR 1/10 NO.	TYPE					ANOMALY	-310,	x 10 ³	VELC	CITY		h 8 -	01/1	ا/10 - وبر	1/10 - gu	yg - a1/1	yg + ol/l	-	c
	STD		0111	3305	2660	00144	450	0000		414									
134	OBS		0111	33053	2660	001//		007/		414									
	STD OBS		0113	3306 33055	2660 2660	00144	+22	0014		415 415									
	STD		0113	3306	2661	00143	386	0029		417									
001	085		0113	33059	2661					417									
	STD		0134	3314	2668	00136	598	0043		410									
	035		0134	33140	2668					410									
	JBS STD		0134	33185 3325	2671 2677	00128	961	0069		413 421									
	OBS		0120	33254	2677	00120	991	0005		421									
	085		0119	33270	2678					423									
	OBS	0068 -	0143	33289	2680					414									
	STD		0131	3330	2680	00124	481	0101		421									
	OBS		0131	33296	2680					421									
	0BS 0BS		0123	33359 33417	2685					427 459									
	STU		0046	3344	2688 2689	00116	572	0131		407 467									
	085		0046	33440	2689	0011		0-51		467									
	OBS	0107	0043	33572	2695				14	510									
	OBS		0068	33530	2697					460									
	STD		0107	3386	2715	00092	290	0157		546									
	085 085		0107	33860	2715					546									
	OBS	- '	0150	33897 33890	2715 2715					568 564									
	STD		0159	3393	2717	0009	133	0181		575									
	OBS		0159	33928	2717			,.,,		575									
	OBS		0174	34007	2722				14	584									
	OBS		0139	33975	2722					569									
	085	0183	0219	34170	2731				14	610									

NCE	O. CODE LATITUDE			- #	MARSO	DEN	STATIO	MIT P				RIGINA	TOR®	5	DEPTH	MAX. OEPTH	0.8	WAVE	S TH	EA-	CLOUD		1 5	NOOC IATION	
10.	CODE 1/10			. 10 7	SOUA		IGA			YEAR	CRUISE NO.		ATIO		TO SOTTOM	OF	-	HGT PER		or	TYPE AMT			UMBER	
NO.		ODE . 1/10 . 11/			10*	1° /	MO OA	Y HR,	1/10					· ^		3 MTL.									
008	Ev				149		04 0			967	119				0603	06	19	3 2	X	1	0 0	l		0026	
					-	WAT		WI	SPEED	BARO		IR TEM	_	VI5.	NO, OBS.	SPE	CIAL								
		TIME OF NO. TYPE 1/10 NO. TYPE		0	COOE	TRANS.	IR.	OR	(mbs)		UL9	BUL	CODE	OEPTHS	OBSERV	ATIONS									
				ŀ	-		-		200	-	_	-01	7 7	25	1										
					DT	SD :	32	508	201	0 -0	00 -	_	_	27	1	_		_					Г		
	MESSENGR		DEPTH (m)	T	°C	5 ./	.	SIGM	A-T	SPECIFIC	VOLUM	A.E	₹ ∆ O OYN. M.		UND	02 ml/	PO4-P			NO2-N	NO3-N	\$1 O4-51 ug = 01/1	pН	ç	
	HR 1/10									ANUM.	WE1-110	1	X 10 ³	VEL	OCITY		µg • a1/	1 yg-0	1/1	1/10 - gu	pg - a1/I	pg - 0171			
																1					-				
	1	1	STD	0000	, U.	141	335	5 '	268	88	001	1845	5	0000	14	537		,							
	1.4	7		0000		141	335		268					-	14	537									
		•		0010		134	335		268		001	1802	2	0012	14	535									
			OBS	0010	-	134	335		268						14	535									
			STD	0020		126	335	5	268	39	001	1752	2	0024		533									
	0.0	3	OBS	0020	0	126	335	50	268	39						533									
	003 OF		OBS	0025	0	126	335	50	268							534									
			STD	0030		177	336	_	269		001	1244	4	0035		559									
			OBS	0030		177	336		269							559									
			OBS	0045		216	337		270				_	0054		580									
			STD	0050		266	339		271		000	9750	U	0056		+605 +605									
			OBS	0050		266	339		27:							+505 +585									
			OBS	0053		218	339		27							610									
			OBS	0059 0075		268 273	341 343		277		000	7030	0	0077		618									
			STD	0075		273	343		27:		000	,,,,,,	•	007.		618									
			OBS OBS	0083		306	344		27							+634									
			OBS	0087	-	283	344		27							+625									
			STD	0100	-	284	344		27		000	632	5	0094		+628									
			OBS	0100		284	344		27						14	4628									
			STD	0125		308	345	5	27	54	000	0562	1	0109	14	4644									
			085	0125	0	308	345	52	27	54						4644									
			STD	0150	0	350	346	3	27	57	000)543	1	0123		4667									
			OBS	0150	0	350	346		27							4667									
			OBS	0160		359	346		27							4673									
			STO	0200		361	346		27	-	000	533	2	0149		4681									
			OBS	0200	-	361	346		27							4681									
			OBS	0218		361	346		27		0.6			0.1.7.0		4684									
			STD	0250		426	348		27		000	0494	9	0179		4718									
			OBS	0250		426	348		27							4718 4719									
			OBS	0275		418	348		27		0.07	3 / 8 7	0	0200		4719 4 7 33									
			ST0			440	348 348		27 27		000	0487	Ų	0200		4733									
			OBS	0300	-	440	348		27							4753									
			OBS	0350		468	349		27		000	0475	4	0248	_	4761									
			STD	0400	-	467	349		27		000	رببر	*	0-40		4761									
			OBS	0500	-	451	349		27		0.00	0446	9	0294		4772									
			STD OBS	0500		451	349		27		000		-	3-7-		4772									
			0BS	0575		437	349		27							4778									
			VUS	0,70	-	421	2 4 2	* /	-																

REFERENCE SHIP LATIT	une lo	ACITUDE E	MARSDEN SOUARE	STATION TIL		ORIGINATO	OR*S	DEFIN De	AX. PTH OR	WAVE	WEA-	CLOUD			IODC	
CODE NO. CODE	1/10	AGITUDE TOOM		MO DAY H	YEAR	CRUISE STAT	TION	entroud 1	OF OF	SERVATIONS	THER	CDDES		\$1	LMBER	
318008 EV 465							******	2 %	IPL'S DIR		+	MA 39YT	<u> </u>	- 14	- I	
31 8008 EV 465	74N U4	657 W	149 66 WAT		62 1967				10 19	3 2	X1	0 3			0027	
			COLOR	******	SPEED MET		VIS.	NO. OBS.	SPECIAL							
			CODE	(m) DIR.	OR (mb		ULB CODE	DEPTHS OBS	ERVATIONS							
			DT	SU 05	S08 19	3 -006 -0	17 7	22								
MESSENGR CAST	CARD						_									
IME OF NO.	TYPE	DEPTH (m)	I C	s */	SIGMA-T	ANDMALY-X107	≨ △ D DYN. M. x 10 ³	VELOCITY	02 ml/l	PO4-P µg = qt/l	DTAL-P pg - 01/1	NO ₂ -N ug - ol/1	NO3~N J/10 - gu	\$1 Q4-\$i	ρН	C
HR 1/10	 						X 10-	-	_				pg - 0171	Pg = 0,7 (1		4
	STD	0000	0350	1 3399	3704	0010145	0000	1//0	,		- 1					
162	OBS	0000	0350	33990	2706 2706	0010145	0000	1463								
202	STD	0010	0296	3399	2710	0009684	0010	14634								
	OBS	0010	0296	33989	2710	2007004	0010	1461								
	STD	0020	0239	3399	2716	0009193	0019	14589								
002	OBS	0020	0239	33993	2716			14589								
	OBS	0025	0235	34029	2719			14589								
	STD	0030	0255	3409	2722	0008562	0028	14599								
	OBS OBS	0030 0043	0255	34094	2722			14599								
	510	0043	0130 0142	34060 3415	2729	0007307	0011	14540								
	OBS	0050	0142	34150	2736 2736	0007307	0044	14554								
	STD	0075	0268	3440	2746	0006376	0061	14554								
	OBS	0075	0268	34401	2746	0000370	0001	14616								
	STD	0100	0279	3448	2751	0005867	0077	14626								
	OBS	0100	0279	34483	2751			14626								
	STO	0125	0309	3456	2755	0005539	0091	14649								
	OBS	0125	0309	34564	2755			14645	5							
	STD	0150	0326	3461	2757	0005384	0104	1465								
	OBS STD	0150 0200	0326 0333	34608	2757	0005172	0101	14651								
	OBS	0200	0333	3465 34650	2760 2760	0005173	0131	14668								
	STD	0250	0363	3471	2762	0005058	0156	14668								
	OBS	0251	0364	34712	2762	0005050	0170	14691								
	STD	0300	0423	3482	2764	0004885	0181	14725								
	OBS	0300	0423	34823	2764			14729								
	STD	0400	0465	3490	2766	0004880	0230	14760								
	OBS	0400	0465	34901	2766			14760								
	STO	0500	0463	3493	2769	0004736	0278	14776								
	OBS STD	0500 060 0	0463 0438	34932 3493	2769 2771	0004540	0335	14776								
	OBS	0600	0438	34932	2771	0004549	0325	14783								
	STD	0700	0426	3493	2773	0004511	0370	14783								
	OBS	0700	0426	34932	2773	0004511	0570	14794								
	STD	0800	0412	3493	2774	0004444	0415	14805								
	OBS	0800	0412	34932	2774			14805								
	STD	0900	0398	3493	2776	0004372	0459	14816								
	OBS	0900	0398	34932	2776		- 6 -	14816								
	STO OBS	1000	0387	3493	2777	0004332	0502	14828								
	OBS	1000 1050	0387 0382	34932 34932	2777 2777			14828								
	003	1030	0302	34732	2111			14834								

REFERENCE	_			- E	MARSOEN	T	STATION TH	ME			ORIGIN.	ATOR'S	5	OEPTH	MAX. DEPTH		WAVE SERVATION	16	WEA-	CLOUD			NOOC	
CTRY ID.	CODE	LATITU	OE L	ONGITUDE NOC	SQUARE		(G M T)		YEAR	CRUISE NO.		TATIO		TO BOTTOA	1 00		HGT PER		COOE	TYPE AM	7		NUMBER	
CODE NO.	10001	ļ.	1/10	1/10 =	10" 1"	N	AO DAY HE			+	_		× -		3 1311 2	1) t A	26.3		<u> </u>		0030	
31800	8 EV	4657	5N 0)4643 W	149 6			75	1967					1006	10	19	3 2		X1	0 3	1	1	0028	
						VATE	R W	INO	BAR	0+	AIR TE/	_	- VIS.	NO. OBS.	SPE	CIAL								
					COL	OR 1	TRANS. OIR.	SPEEC OR FORC	1		DRY ULB	BUL	B CODE	DEPTHS	OBSERV	/ATIONS								
					-	\rightarrow	_		` -		06	-01	7 7	24	_		ĺ							
					D	1	SD 04	508	3 19			_		-			1						e:	5
	MESSEN		CARO	OEPTH (m)	τ ℃		s °/	SIG	MA-T	SPECIFI	VOLU	ME D7	₹ A O	. SC	ORUI OCITY	0 2 ml/	PO4-1		DTA L-P	NO ₂ N μg - αΙ/Ι	NO3-N	\$1 O4-		C
	HR 1/		TYPE					_		-			x 10 ³				+	+	_			_		+
								1						١.	-			Ì			l	1	1	11
	1		STE		042		3424		717	000	904	5	0000		+671									
	1	75	OBS	0000	042		34237	_	717	0.07	07/	1	0009		4671 4667									
			STI		041		3426 34260		720 720	000	876	1	0005		4667									
			085	0010 0020	041		34260		721	000	0871	1	0018		4667									
	0	02	STI OBS	0020	041		34260		721	001			2-10		4667									
	0	02	STI		040		3426		721	000	868	30	0026		4667									
			085	0030	040		34260		721						4667									
			OBS	0040	041		34337		727						4670									
			ST		037		3448		742	000	0674	+0	0042		4660									
			OBS	0050	037		34480		742						4660 4635									
			OBS	0070	030	_	34537 3456	_	753 753	0.0	0569	. 5	0057		4641									
			STI	0075 0075	032		34557		753	00	0 7 6 2	, ,	000		4641									
			0B5 0B5	0080	033	-	34574		754						4647									
			ST		032		3459		756	0.0	0546	53	007	1 1	4646									
			OBS	0100	032		34585	2	756						4646									
			OBS	0110	031		34600	_	758						4644									
			ST		032		3462		758	00	0523	34	008		4650									
			OBS		032		34618		758	0.0	051	2.2	009		4650 4656									
			ST		032		3464 34639		760 760	00	051.	2 6	009		4656									
			0BS 51		036		3472	_	762	0.0	049	2.5	012		4681									
			085	-	036		34718	_	762						4681									
			OBS		035		34718	. 2	763						4679									
			ST		039	3	3479		765	00	047	50	014		4704									
			OBS		039		34792		765		017		0.1 -	_	4704									
			ST		046		3490		766	00	047	42	017		4743									
			OBS		046		34900 3491		766	0.0	047	16	021		4757									
			ST		04		3491		767	00	U+1	10	0 = 1	_	4757									
			085 ST		04:		3493		772	0.0	043	99	026		4763									
			OBS	_	04:		34926		772						4763									
			ST	,	04		3493		774	0.0	042	71	030		4771									
			OBS		04		34926		774				- 0		4771									
			ST		03		3493		775	0.0	042	03	034		4782									
			OBS		031		34928		775	0.0	0/.1	4.0	039		4782									
			ST		03		3493 34928	_	2777 2777	00	041	09	039		4794									
			085		03		34928		2777	0.0	041	93	043		4809									
			ST 085	-	03		34929		2777	0.0					4809									
			OBS		03		34929	_	778					1	4815									

10. 10.	AAT	STATION NUMBER
008 EV 46575N 04628 W 149 66 04 07 187 1967 IIP 9877 0366 03 19 3 2 X1 0		0029
WATER WIND BARD AIR TEMP, C NO. COCCU		1 00271
COLOR TRANS. OIR. OR OFFICE (mbs) BULB BULB CODE CEPTHS OBSERVATIONS		
DT SD 05 S08 193 -006 -017 7 21		
MESSENGR CAST CARD OEPTH (m) T 'C S ' SIGMA-I SPECIFIC VOLUME \$ \(\Delta \) O. SOUND OYN. M. YELOCITY PQ + P TOTAL-P NO2- NO. HR 1/10 VELOCITY PQ + 01/1 PQ +		\$1 O 4 - \$1 pg - ot/1 pH
STD 0000 0537 3407 2692 0011432 0000 14713	1 1	1
187 OBS 0000 0537 34073 2692 14713		
OBS 0005 0536 34073 2692 14713		
STD 0010 0519 3407 2694 0011249 0011 14707		
001 0BS 0010 0519 34072 2694 14707		
STD 0020 0495 3414 2702 0010472 0022 14700		
OBS 0020 0495 34142 2702 14700 SID 0030 0475 3426 2714 0009419 0032 14695		
111 111 111 111 1111 1111 1111 1111 1111		
OBS 0030 0475 34255 2714 14695 OBS 0035 0467 34275 2716 14693		
STD 0050 0465 3429 2717 0009093 0051 14694		
OBS 0050 0465 34287 2717 14694		
OBS 0065 0445 34305 2721 14689		
STD 0075 0400 3433 2728 0008125 0072 14672		
OBS 0075 0400 34330 2728 14672		
STD 0100 0337 3450 2747 0006260 0090 14652		
OBS 0100 0337 34500 2747 14652		
OBS 0114 0333 34555 2752 14653		
STD 0125 0360 3461 2754 0005649 0105 14667		
OBS 0125 0360 34613 2754 14667		
OBS 0135 0355 34612 2755 14667 STD 0150 0387 3469 2757 0005397 0119 14684		
2751 0003371 0117 14004		
08S 0150 0387 34685 2757 14684 08S 0155 0421 34778 2761 14700		
OBS 0167 0387 34731 2761 14687		
0BS 0180 0388 34720 2760 14689		
STD 0200 0458 3489 2766 0004669 0144 14724		
OBS 0200 0458 34889 2766 14724		
STD 0250 0458 3489 2766 0004717 0167 14733		
OBS 0250 0458 34890 2766 14733		
STD 0300 0431 3489 2769 0004457 0190 14730		
OBS 0300 0431 34892 2769 14730		
OBS 0345 0415 34898 2771 14730		

																				,	,			
REFERENCI	E SHIP			- #	MARSO	EN	NOITATE	TIME		0	RIGINA	TOR'S		DEPTH	MAX. DEPTH		WA		WEA	CLOUD	1		1000	
	10. CODE 1. CODE 1.			LONGITUDE NO.	SOUAR		IGMT		YEAR	CRUISE		ATION		BOTTOM	OF			ATIONS	COOL				UMBER	
CODE NO	MESSENGA TIME of		1/10	1/10 =	10°	1"	MO DAY	HR.1/10		NO.	NI	JMBER	\rightarrow	1011011	S'MPL'S	OIR.	HGI	PER 51	EA GOOD	TYPE AM	T		O MI O E M	
31/800	MESSENGR C		5N	046075W	149	66	04 07	200	1967	LIP	987	8		0300	02	19	3	4	X 2	0 3	1		0030	
						WAI	ER	WIND	BARC	A A	IR TEM	P. °C		NO.	SPEC	IAI.								
					C	OLOR	TRANS. DIR	SPEEC	METE	R D	RY	WET	VIS.	OBS. DEPTHS	OBSERV									
					10	ODE	(m)	FORC	E (mbs) BI	UL8	BULB	_	0011113										
						DT	SD 04	S08	3 16	6 0	00 -	-011	7	16										
	MESSENGR	CAST	CARO				T			SPECIFIC	VOLUM		Δο	501	סאט		Τ,	PO4-P	TOTAL-P	NO2-N	NO3-N	S1 O4-S1		5
	TEME 0	NO.	TYPE	DEPTH (m)	T 7	C	s */	SIG	MA-T		ALY-X10	YO Y	N. M		CITY	O 2 m1/l		g - a1/I	pg - al/l	NO - 01/1	μg - al/l	J) = al/l	pH	C
	HR 1/10				-			_				+-^			-		+							H
					1							١								l				11
			ST		04		3412		701	001	0564	00	000		695									
	200)	OBS		04		34121		701						695									
			ST		04		3412		701	001	0575	0(011		696									
			OBS		04		34121		701	001	05/				696 696									
	001		ST		04		3412		702 702	001	0543	5 00	021		696									
	001	L	OBS ST	-	04		3412.		702	001	0542	2 00	032		698									
			OBS	0030	04		3412		702	001	0342	. 0	0 5 2		698									
			ST		04		3412		702	001	0553	3 00	053		700									
			OBS		04		3412		702	001	0 2 2 .	, ,	0 2 2		700									
			OBS		04		34370		727						685									
	HR 1/10		ST			37	3445		733	000	7601	0.0	0 7 5		689									
			OBS		04		34450		733	000					689									
			OBS		04		34438		735						683									
			ST		04	18	3445	2 '	735	000	7414	00	94	14	685									
			OBS	0100	04	18	34452	2 2	735					14	685									
	301		ST	D 0125	04	13	3448	2	738	000	7169	0	112	14	688									
			OBS	0125		13	3448	L 2°	738						688									
			ST	D 0150	04	09	3464		751	000	5959	9 0	129		692									
			OBS		04	09	34640		751						692									
			OBS	0153	04	26	34688	3 2	753						700									
			OBS			45	34590		754						669									
	1/10 T NC		ST			78	3467		757	000	5465	0	157		688									
	200		085			78	34670		757						688									
			OBS			68	3486		762						731									
0.0			ST			36	3488		767	000	4542	0	182		723									
66			OBS	0250	04	36	3488	5.	767					14	723									

					1 4	MARSOEN	STATION TIM		ORIGINATO	R'S O	EPTH MAX.		WAVE	WEA-	CLOUD		N S T	ATION	
REFEREN	_	SHIP	LATITE	IDE LO	NGITUOE	SOUARE	(GMT)	YEAR	CRUISE STATE	U14 100	TO OF	0000	RVATIONS	THER	TYPE AM			JMBER	
	10,	COOE	•	1/10	1/10 S	10° 1° A	NO DAY HR.	1/10	NO. NUM	BER SO	3 MILE	1	HGT PER SE			1		0.0.2.1	
318	008	ΕV	4719	N O	4610 W	149 76 (04 07 22	20 1967	IIP 9879	0	384 03	30	3 3	X2	013			0031	
1 210	000	C 4	,,,,,	, ,, ,		WATI	ER WI	IO BAR	O- AIR TEMP.		NO. SPE	CIAL							
						COLOR	TRANS. DIR.	SPEED MET	ER DRY W	FT CODE	OBS. EPTHS OBSERV	ATIONS							
						COOE		FOPCE Imb			1.0								
						DT	SD 03	508 20	3 000 -0	11 7	18								
		MESSENG		6400		- 40			SPECIFIC VOLUME	₹ △ O DYN. M.	SOUNO	0 2 m1/l	PO 4-P	TDTAL-P		NO3-N	\$1 04-51 pg = at/1	pН	o c
		TIME	or NO.	CARO	OEPTH (m)	7 ℃	s °/	SIG M.A.—T	ANDMALY-X107	x 10 ³	VELOCITY		µg + 01/1	μg - 01/I	1/1p - gu	yg - o1/1	pg - 007		4
		HR 1/1	0	-															
				1		0432	3438	2728	0008038	0000	14674		,						
				STD	0000	0432	34375	2728	0000000	0000	14674								
		22	20	08S STD		0432	3438	2728	0008048	0008	14675								
				085	0010	0432	34375	2728			14675								
				STE		0432	3438	2728	0008058	0016	14677								
		0.0	2.1	085	0020	0432	34375	2728			14677								
		01	0 1	ST	-	0429	3438	2728	0008037	0024	14677								
				085	0030	0429	34375	2728			14677								
				ST	0050	0427	3438	2728	0008036	0040	14680								
				085	0050	0427	34375	2728			14680								
				ST		0415	3438	2730	0007938	0060	14679 14679								
				OBS	0075	0415	34375	2730	0007072	0080	14680								
				ST		0408	3438	2731	0007823	0080	14680								
				OBS	0100	0408	34384	2731	0007561	0099	14685								
				ST		0408	3442	2734	0007561	0099	14685								
				OBS	0125	0408	34422 3454	2743	0006768	0117	14693								
				ST	0150 0150	0414	34539	2743	5000,00	0 '	14693								
				085	0150	0363	34552	2749			14675								
				08s	0182	0416	34707	2756			14701								
				085		0396	34680	2756			14694								
				ST		0415	3471	2756	0005516	0148	14704								
				OBS	_	0415	34714	2756			14704								
				OBS	-	0457	34842	2762			14729								
				ST		0447	3485	2763	0004924	0174									
				OBS		0447	34846	2763			14727								
				OBS		0465	34930	2768		.1	14738								
				ST	D 0300	0439	3492	2770	0004328	0197	14733								
				085		0439	34921	2770			14732								
				085	0350	0417	34921	2773			17176								

REFERENCE SHIP	UDE LO	NGITUDE BOUTE	MARSOEN	STATION TI	ME	ORIGINATO		OEPTH MAX.	WAVE	WEA-	CLOUO		Τ,	400C	
COOE NO. CODE	1/10			MO OAY HI		CRUISE STAT	ION BER	BOTTOM S'MPL'S DI	OBSERVATIONS	THER CODE	CODES		51	UMBER	
318008 EV 474	0 N 04	610 W 1	49 76	04 08 0	000 1967	11P 9880					TYPE AMI	-			
			WAT		INO BAR	A IO TEALD	2	NO	6 2 3	X2	013	I	1	0032	
			COLOR	TRANS. OIR.	SPEEO MET	ER ORY W	ET CODE	I ONE I SPECIAL	45						
			DT	SD 05	S10 21		06 7	23	-						
MESSENGR CAST	CARO			32 32	010 21	1									_
TIME OF NO.	TYPE	DEPTH (m)	1 %	s */	SIGMA-T	SPECIFIC VOLUME	₹ △ 0 0YN, M. x 10 ³	VELOCITY 02 m	1// PO4-P		NO2-N ug - at/I	NO ₃ -N	5104-51	рН	S
							X 10-	-	- 201	DY - 0171	og - 60/1	μg = at/l	yg = at/1		С
, ,	STD	0000	0132	3387	2713	0009394	0000	14537	1		ļ				
000	085	0000	0132	33865	2713		0000	14537							
	STD	0010	0100	3384	2714	0009386	0009								
	OBS STD	0010 0020	0100 0198	33840 3420	2714 2735	0007211		14524							
002	OBS	0020	0198	34200	2735	0007314	0018	14574 14574							
	085	0025	0208	34240	2738			14580							
	STD	0030	0182	3430	2744	0006482	0025	14570							
	OBS STD	00 <u>3</u> 0 0050	0182 0241	34295 3440	2744			14570							
	085	0050	0241	34400	2748 2748	0006147	0037	14601							
	OBS	0055	0222	34400	2750			14601 14593							
	STD	0075	0263	3447	2751	0005851	0052	14615							
	OBS	00.75	0263	34465	2751			14615							
	STO OBS	0100 0100	0292	3453	2754	0005626	0067	14633							
	085	0121	0311	34530 34558	2754 2754			14633							
	STD	0125	0302	3456	2755	0005514	0081	14645 14642							
	OBS	0133	0295	34560	2756		0001	14640							
	STD OBS	0150	0331	3465	2760	0005100	0094	14659							
	STD	0150 0200	0331 0331	34652 3466	2760 2760	0005004	0110	14659							
	OBS	0200	0331	34658	2760	0005094	0119	14668 14668							
	STD	0250	0336	3466	2760	0005136	0145	14678							
	085	0250	0336	34664	2760			14678							
	STD OBS	0300	0393	3479	2765	0004804	0170	14712							
	085	0383	0468	34791 34920	2765 2767			14712 14759							
	STD	0400	0442	3491	2769	0004550	0216	14759							
	085	0400	0442	34910	2769			14751							
	STD OBS	0500	0430	3492	2771	0004443	0261	14763							
	STD	0500 0600	0430	34920 3492	2771 2773	0004350	0305	14763							
	OBS	0600	0413	34920	2773	0004350	0305	14772 14772							
	STD	0700	0403	3492	2774	0004331	0349	14784							
	085	0700	0403	34920	2774			14784							
	STD OBS	0800 0800	0388 0388	3492	2776	0004251	0392	14795							
	STD	0900	0381	34920 3492	2776 2776	0004260	0434	14795							
	OBS	0900	0381	34920	2776	0004200	0734	14808 14808							
	OBS	0930	0377	34920	2777			14812							

															,					
REFERE	FNCE				_ =	MARSDEN	STATION TIA	ΛĒ	ORIGINA	TOR'S	DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA-	CLOUD		s	NODC TATION	
CTRY	ID.	SHIP	LATITU	DE LO	NGITUDE E	SQUARE	(GMT)	YEAR		ATION IMBER	BOTTOM S	OF MPL'S		HGT PER SEA	CODE	TYPE AMT		l N	UMBER	
CODE	NO.	-		1/10	1/10		MO DAY HR					10	05	3 3	X 7	0 3			0033	
318	8008	EV	4759	N O	4610 W	149 76 WAT		24 1967	A ID TEM		1042 NO.			13131	1 ^ '	. 0.5			0033.	
						COLOR		SPEED MET	ER DRY	WET COD	OBS.	SPEC BSERVA								
						CODE	TRANS. DIR.	FORCE [mb		BULB	DEPTHS									
						DT	SD 06	512 19	3 000	000 4	24									
		MESSEN			T				SPECIFIC VOLUM	E Ž∆D DYN. M	NUO2	D	02 ml/l	PO4-P	TOTAL-P	NO ₂ -N	NO3-N	SI 04-5		S
		TIME		C ARD TYPE	DEPTH (m)	7 ℃	s */	SIGMA-T	ANOMALY-X10	X 10 ³	VELOC)TY	02 1110 7	yg = a1/1	ا/≀ه - وبر	yg - al/l	yg - 01/1	yg - a1/		C
		HR 1/	10					-												
			1	STD	0000	0391	3439	2733	0007548	0000	146	57		,						
		0	24	085	0000	0391	34386	2733			146	57								
			24	STE		0385	3445	2739	0007002	2 000										
				085	0010	0385	34452	2739			146									
				STE		0385	3448	2741	0006819	5 0014	146 146									
		0	04	085	0020	0385	34478 3449	2741 2742	0006668	3 002										
				510	0030	0379	34491	2742	000000		146									
				085 STI		0362	3456	2749	000604	003	4 146	55								
				085	0050	0362	34555	2749			146									
				085	0072	0334	34640	2759			146									
				ST		0338	3465	2759	000511											
				ST		0369	3473	2762 2762	000483	6 006	146									
				085	0100 0105	0369 0404	34730 34820	2766			146									
				085 085	0115	0372	34779	2766			146	73								
				STI		0372	3478	2766	000451	9 007										
				085	0130	0372	34779	2766			146									
				OBS	0135	0364	34770	2766			146									
				ST		0364	3477	2766	000453	0 008	$\frac{3}{146}$									
				085	0150	0364 0430	34770 3488	2766 2768	000443	9 010										
				5T	0200	0430	34879		000		147	712								
				085	0230	0424	34880				147									
				ST		0427	3488	2769	000442	2 012	-	720								
				OBS		0427	34884			5 036		720								
				ST		0439		2770	000439	5 015		733								
				085		0439		2770 2771	000435	5 019		747								
				ST		0432	-		000432	, ,,,		747								
				085 51		0432		2772	000433	8 023	7 14	759								
				085		0422						759								
				ST		0412	3492	2773	000431	6 028		772								
				OBS	0600	0412			0.00/.00			772 783								
				51		0399		2775	000425	6 032		783								
				089		0399		2775	000423	7 036		796								
				ST 085		0390			U30 12.			796								
				ST		0382		2777	000422	7 040		809								
				085	•	0382						809								
				51	D 1000	0369		2778	000416	2 045		820								
				OBS		0369						824								
				085	1020	0369	34926	2778				527								

ID.	SHIP	LATIT	NOE	LON	GITUOE	INDCTR	M ARS	OEN ARE	STAT	ION TI	ME	YEAR	CRU	ORIGIN	_		DEPTH	OFFI	H OB	WAV	VE TIONS	WEA	\- C	CLOUD			NODC	
NO.	0001		1/10		1/10	Z	10"	1*	MO	DAY H	R.1/10		NO	0.	STAT	ABER	воттол	OF S*MPL		HGT		THE	12	COOES		2 4	TATION	
800	Eν	481	55N	046	510 W	1	49			08 0	146	196	7 11	1P 98	882		1189	11	1 05		2	X 7		0 3			0024	
								WA		W	IND	- 8A		AIR TE	7	21.7	NO.	1	ECIAL	'	- 1	1 ^1	,	013	1	ì	0034	
							- 1	COLOR	TRANS.	OIR.	OR FORCE	(m)		DRY BULB		LET COD	OBS.	ODEED	VATIONS									
							ľ	ΟT	SD	06	518	11	66 -	-006		06 4	26	-										
,	MESSENGR	CAST	CARC	-						-	1		T .		-					Ļ			1					_
	TIME HR 1/10	NO.	TYPE		DEPTH (n	1)	T	°C	S	*/	SIGA	4 A -T	ANO	IFIC VOLU	107	₹ △ 0 0YN. M x 10 ³	. SO VEL	OCITY	02 ml/l		04→P - 01/I	TOTAL-		02-N	NO3-N	51 O4-Si	pH	300
				\rightarrow		-	_		 		_		-			X 10-	-			120		29 - 017	D'9	- at/l	νg - οl/l	νg = at/i		(
'		1	51	D '	0000)	00	009	334	+4	26.	R 7	1 00	1194	. 7	0000	1 /	475		1	- 1			ļ				ļ
	04	6	OBS	5	0000)	0 (009		440	26		00	, 11, 7	'	0000		475										
			ST		0010			800	334		26		0.0	1194	0	0012		477										
			OBS ST		0010			800	334		26							477										
	004	4	OBS		0020			006	334		26. 26.		0.0	1192	8 8	0024		477										
			OBS		0025			003	334		26							477										
			ST	D	0030			000	334		26		0.0	1189	8	0036		476										
			OBS		0030			000	334		268							476										
			085 51		0040		-00)02)65	335		269							478										
			085		0050			65	338		27:		00	0888	7	0057		515										
			ST		0075			225	343		27		0.0	0682	6	0076		515 596										
			OBS		0075		02	225	342		274		00	0002		0010		596										
			ST		0100			46	344		274		00	0624	5	0093		611										
			OBS ST		0100			92	343		274				_			611										
			OBS		0125			92	344		275		00	0604	2	0108		636										
			STI	D	0150			07	345		275		0.0	0556	9	0122		636 648										
			OBS		0150			0.7	345	60	275		• •	0	_	0-22		648										
			STI		0200			53	347	_	276		00	0481	8	0148		678										
			OBS ST		0200			153	347		276				_			678										
			0BS	0	0250			65	347		276		00	0468	8	0172		692										
			STI	D	0300			77	347		276	_	0.0	0464	5	0195		692 705										
			OBS		0300		03	77	347		276		00	0 . 0	_	0-75		705										
			OBS	_	0356			71	347		276							712										
			STI OBS	U	0400			13	348		277		00	0440	6	0241		738										
			510	D	0500		04		348 348		277		0.0	0446	^	0305	14											
			OBS		0500		04		348	-	277		00	U4401	U	0285	14											
			OBS		0540		03	87	348		277						14											
			OBS		0575		04		349		277	3					14											
			STC OBS)	0600		04		349		277		000	04356	6	0329	147	783										
			STE)	0700		04		349 349		277		00/	0.00	^	0370	147											
			085	-	0700		04		349		277		000	04280	J	0372	147											
			STO)	0800		04	10	349		277		000	04272	2	0415	148											
			OBS	,	0800		04		349		277						148											
			STD)	0900		03		349		277		000	04251	1	0458	148	316										
			OBS STD)	0900		03		349 349		277 2 7 7		000	14.24	2	05.	148											
			OBS		1000		03		349		277		000	04243)	0500	148											
			STD)	1100		03		349		277		000	04211	l	0542	148											
			OBS		1100		03		349		277						148											
			OBS		1140		03	78	349	49	277	9					148											

																							_	_
REFE	RENCE			-		- #	MARSDEN	STATION TO	M.E				ATOR'S		DEPTN	MAX.	ORS	WAVE SERVATIONS	WEA- THER	CLOUD			NODC	
CTRY	10. NO.	COOE	LATITU	0E L	ONGITUOE '1/1	DRUFT	SOUARE	MO OAY HE	1/10	YEAR	CRUISE NO.		TATION NUMBER		801108		1	HGT PER SEA	1 0000	TYPE AM	ī	- 1	NUMBER	_
-	_	- FV	, o a s		04610 V	\neg			66	1967	7 11P	98	83		1646	15	04	3 2	X 7	0 3			0035	5
1 31	8008	A EVI	4835	N I C)401U ¥	'	WA.		IND	RAT			MP. °C	- VIS	NO.	1	CIAL							
							COLOR	TRANS. DIR.	SPEED	MET	ER C	DRY ULB	WET	CODI	OBS.	OBECON	ATIONS							
							DT	SD 05	518	E [06	-006	4	28	+-								
							101	30 00	1						_			PO ₄ -P	TOTAL-P	NO2-N	NO3-N	5104-5		5
		MESSENGR TIME OF	CAST NO.	CARD	DEPTH	[m.]	τ ℃	s */	SIG	T-AM	SPECIFIC	ALY-XI	107 O	∆ 0 YN. M X 10 ³	. VEI	LOCITY	O2 ml/	1 pg - 01/1	20 - at/I	no - ai/i	μg - α1/I	νg - α1/		c
		HR 1/10							+		-		_		+									
				! STI	000	0.0	0278	3434	27	40	000	685	2 0	000	1.	4608		1			•			•
		066		OBS	000		0278	34343		140						4608								
				ST			0280	3435		740	000	683	37 0	007		4610								
				OBS	00		0280 0284	34348 3436	_	740 741	000	678	17 0	014		4610 4614								
		003		ST1	00.		0284	34360		741	000	, , ,	,,,	01-		4614								
		003		085	00		0285	34362		741					1	4615								
				ST	00	30	0287	3436		741	000	678	38 0	020		4617								
				OBS	00		0287	34364 3438		741 742	000)669	20 0	1034		4617 4621								
				ST 085	00 00		0289 0289	34381		742	000	,00,	, ,			4621								
				ST			0410	3480		764	000)469	95 (0 4 8	3 1	4682								
				OBS	00		0410	34800		764						4682								
				085	00		0390	34800		766						4677 4691								
				085			0420 0405	34846 3484		766 767	000)437	76 (0059		4685								
				ST OBS			0405	34839		767	000	,				4685								
				ST			0389	3483		769	000	0428	83 (07		4682								
				OBS			0389	34833		769						4682								
				ST		50	0397 0397	3484 34837		768 768	000)435	58 (8 00		4690 4690								
				0BS ST		50 00	0404	3487		770	000	0423	32 (10		4701								
				OBS		00	0404	34870		770						4701								
				ST		50	0408	3487		769	000	043	38 ()12		4711								
				OBS		50	0408	34868		769 770	0.0	043	72 /	14		4711 4723								
				ST OBS		00	0415 0415	3488 34880		770	00	043	15) 1 ·4		4723								
				085		31	0434	34907		770						4736								
				ST		00	0413	3490		772	0.0	042	71	018		4739								
				OBS		00	0413			772	0.0	044	3.5	023		4739								
				51 0BS		00	0428 0428	3492 34918		771 771	00	044	33	0 2 3		4762								
				51	-	00	0428			773	00	043	46	027		4772								
				OBS		00	0412	34919	2	773						4772								
				ST	_	00	0405			774	00	043	55	032		4785								
				OBS	,	00	0405 0396			774 775	00	043	44	036		.4785 .4798								
				ST OBS	_	300	0396			775	00	045		-0		4798								
				\$1		900	0385		2	776	00	043	07	040	7]	4810								
				OBS	0 9	900	0385			776		0/5	0.1	065		4810								
				51		000	0377			777 777	0.0	043	0.1	045		14823 14823								
				0BS	-	000	0377 0374			777	00	043	52	049		4839								
				0B3	_	100	0374			777	-	,	_		1	4839								
				\$1		200	0368	3493	2	779	0.0	042	76	053		14853								
				0В3		200	0368			779		0 / 2	6.3	057		14853 14869								
				5.		300	0365			780	00	042	42	057		14869 14869								
				0B3		400	0364			780	0.0	043	06	062		14885								
				OB:	5 1	400	0364	34944	+ 2	780						14885								
				S.	TD 1	500	0360			781	0.0	042	78	066		14901								
				08:	S 1	500	0360	3495	2 2	781						14901								

REFERENCE SHIP LATITU	105	NGITUDE E	MARSOEN	STATION TIM		ORIGINAT		DEPTH ,	MAX. DEPTH O	WAVE	WEA	CLOUG			NODC
CTRY ID. CODE LATITU	1/10	NGITUDE HOS		MO DAY HR.	YEAR		TION MBER	OTTO9	OF DIR	BSERVATIONS	THER	TYPE AM			UMBER
318008 EV 442		811 W			91 1967	 				 	i A	TIPE AM	<u> </u>	-	
1 310000 24 442.	, 14 0-	7011 W	WAT		un l	A ID TEAA D		3658	13 0	1 5 2	X2	7 8	I	- 1	0036
			COLOR	TRANS. DIR	SPEED MET	0-	WET COD	NO. OBS.	SPECIAL BSERVATION	<					
			CODE		FORCE (mb	s) BULB 1	BULB	DEPTHS		1					
				01	525 11	12 050	044 5	13							
MESSENGR CAST	CARD	DEPTH (m)	r °c	s */	SIGMA-T	SPECIFIC VOLUME	₹ ∆ D	SOUN	D 0	/ PO4-P	1-1ATO1	NO2-N	NO3-N	SI 04-Si	
HR 1/10 NO.	TYPE			, "	310MA-1	ANOMALY-X107	X 103	, AFFOC	ITY O2 ml	/! pg • at/!	μg - o1/l	µg - at/1	µg = at/1	/10 - gu	pН
' '	STD	0000	0531	3396	2684	0012189	0000	147	09	'	ŀ			'	1
091	OBS	0000	0531	33963	2684			147							
	STD	0010	0531	3396	2684	0012200	0012	147	11						
	STD	0020	0531	3396	2684	0012219	0024								
091	085	0027	0531	33962	2684			147							
	STD	0030 0050	0455 0173	3397 3400	2693	0011370	0036								
091	085	0053	0164	34006	2721 2722	0008652	0056								
071	STD	0075	0459	3447	2732	0007683	0077	1456							
091	085	0080	0476	34517	2734	000,005	0011	1470							
	STD	0100	0302	3439	2742	0006769	0095								
091	OBS	0106	0270	34369	2743			146							
	STD	0125	0332	3452	2749	0006082	0111								
	STD	0150	0386	3466	2755	0005575	0125	1468	83						
091	085	0160	0399	34696	2757			1469							
0.01	STD	0200	0386	3469	2757	0005413	0153								
091	OBS STD	0213 0250	0382 0428	34685 3479	2758 2761	0005135	0170	1469							
	STD	0300	0420	3488	2764	0003133	0179								
091	OBS	0319	0475	34904	2765	0004748	0204	147							
***	STD	0400	0453	3491	2768	0004697	0253								
091	OBS	0426	0447	34908	2768			1475							
	STO	0500	0437	3492	2770	0004560	0299	1476	65						
	STD	0600	0423	3493	2772	0004427	0344	147	76						
091	085	T0644	0416	34929	2773			1478							
	STD	0700	0403	3492	2774	0004331	0388								
201	STD	0800	0386	3491	2775	0004302	0431								
091	OBS STD	T0858 0900	0378 0375	34907 3491	2776	0004344	04.74	1480							
	STD	1000	0370	3491	2776 2777	0004264	0474 0516								
091	085	1085	0367	34913	2777	0004292	0.218	1483							
	STD	1100	0367	3491	2777	0004312	0559								
	STD	1200	0364	3492	2778	0004330	0603	-							
091	OBS	T1276	0363	34922	2778			1486							

NCE .																					_		
	SHIP				E #	MARS	DEN	STATIO	N TIA		EAR		DRIGINAT		OEPTH	Utrin	08	WAVE SERVATIONS	WEA	- CLOUE		5	NODC
10.	ODE	LATITUD		LONGI	10 7 1	SOUA		MO D			EAR	CRUISE NO.		TION MBER	BOTTO	M S'MPL"		HGT PER SE				N	UMBER
NO.			1/10		1/10 =	10°					0 (7	_	000		3300			5 2	X 2	7 8			0037
008	EV	4428	N	048	26 W	149	48			13 1	967		988		3200	T		اعادا	1 12	1 7 0		1	00271
						ŀ	COLOR			SPEED	BA RO			WET COD	NO.	O O C E O Y	CIAL /ATIONS						
							CODE	(m)	DIR.	FORCE	(mbs)		ULB I	BULB	DEPTH	5							
						Ì			03	525	13	2 0	56	050 5	13			L					
[M	ESSENGR	CAST	CARC	, [T	,				C VOLUME	₹ △ D		DUND	O2 ml/	PO4-P	FOTAL-			51 O4~Si	pН
!	TIME		TYPE		OEPTH [m]	'	*⊂	\$ '	···	SIGMA	`-'	MOMA	ALY-X197	x 10 ³	,, \ \ \chi_E	LOCITY	0,,	1/10 - وبر	νg = α1/1	l µg - a1/l	yg - al/l	yg = at/l	
H	R 1/10	+		-		+-		+															
		1	ST	, n	0000	١ ،	510	338	4	267	7	001	2856	0000	1	4699		'	'				
	111	2	OBS		0000		510	338		267						4699							
	11.	-	ST		0010		498	338		267		001	2702	001	3 1	4696							
			ST		0020		487	338	5	268	0	001	12543	002	5 1	4693							
			ST		0030	0	475	338	6	268	2	001	12391	003	-	4690							
	11:	3	OBS	5	0042		461	338		268						4686							
			ST	0	0050	0	347	339		269		001	10833	006	_	4640							
	11	3	OBS		0051		336	339		270						4635							
			ST		0075		295	342		273		000	7516	008		4626							
	11	3	OBS		0077		291	343		273		0.07		010		4625 4700							
			S 1		0100		449	345		274		000	06778	010		4704							
	11	3	OBS		0102		458	345		274		000	06740	011		4708							
			51		0125		457	346		274			36648	013		4707							
			S1 089		0150 0154		1443	346		274		000	30040	013		4707							
	11	3	51	_	0200		380	346		275		000	05860	016		4688							
	11	2	085		0208		376	346		275		•				4688							
	11	2		TD.	0250)445	34		275		000	05545	019	5 1	4725							
				T D	0300		1493	348		276		000	05321	022	2 1	4755							
	11	3	OB:		T0316	0	501	348	94	276	1					4761							
	_	_	S1	TD	0400	0)466	34	90	276	6	0.0	04899	027		4761							
	11	3	OBS	S	0425	-	457		906	276				- 2 -		4761							
				TD	0500)444	34		276			04708			4768							
				TD	0600		428	34		27		00	04626	036		4778							
	11	3	0B:	-	T0643)421		906	27			04400	04.1		4782 4788							
			_	TD	0700		0411	34		27			04498			4798							
		_	_	TD	0800		396	34	91 911	27		00	04418	0+5		4803							
	11	3	OB:		T0852)388)380	_		27		0.0	04307	050		4808							
				TO TD	1000		366			27			04215		_	4819							
	11	2	0 B:		T1080		359		916	27		50				4829							
	11	٥		TD .	1100		0358			27		0.0	04189	058		4832							
				TD	1200		354			27			04216		9 1	4847							
	11	3	OB:		1266		3354		917	27					1	4858							

REFERENCE CTRY ID.	SHIP	LATITU	DE LO	NGITUDE 2	MARSDEN SOUARE	STATION TI		YEAR		GINATO		DEPTH	OCFIE		DBSE	WAVE RVATIONS	WEA-	CLOUD		N	DDC ATION
CTRY ID.	CODE	*	1/10	NGITUDE 1/10	10" 1"	MO DAY H			NO.	HAT?	BER	BDTTO	M S'MPL			AGT PER SEA	CODE	TYPE AM		NI	JMBER
318008	EV	4431	. N 04	836 W	149 48	04 09 1		1967		9886		2468	8 15	0	13	6 2	X2	03			0038
					WA		/IND	BARD	• -	TEMP, *	VIS,	NO. OBS.	SPE	ECIAL							_
					COLDR	TRANS, DIR.	SPEED OR FORCE	(mbs)			LB CODI	DEPTH	S DBSER	VATIO	NS						
					DT	SD 05	528	139	05	6 0	0 6	36									
	MESSENGR TIME	CAST NO.	CARD	DEPTH (m)	τ °c	5 %.	SIGM	AA-T	SPECIFIC V	OLUME VIO?	₹ △ D DYN, M X 10 ³	SC	DNU	021	ml/I		TOTAL-P	NO2-N	NO3-N	S1 D4-S1	рН 3
	HR 1/10		1176			-	-		ANOMAL		X 10 ³	VE	LOCITY			yg • at/l	μg - ot/l	μg - at/l	yg - at/l	μg - α1/l	
	1		C T D	0000	0(12	3404	1		0013	503	0000	1								1	}
	13	3	STD OBS	0000	0612	3404 34035	268		0012	293	0000		4743 4743								
			STD	0010	0611	3404	268		0012	594	0013	1	4744								
			08S STD	0010	0611 0611	34035 3404	268 268		0012	608	0025		4744 4746								
	00	3	085	0020	0611	34035	268		0012	000	0023		4746								
			OBS	0025	0609	34035	268		0013	E E /	0000		4746								
			STD 085	0030	0605 0605	3403 34034	268		0012	226	0038		4745 4745								
			OBS	0043	0595	34022	268	81				1	4743								
			STD OBS	0050 0050	0413	3413 34131	27:		0009	728	0060		4671								
			OBS	0060	0414	34319	27						4671 4675								
			STD	0075	0681	3473	27	25	0008	394	0083	14	4792								
			OBS STD	0075 0100	0681 0585	34729 3465	27:		0007	790	0103		4792 4757								
			085	0100	0585	34652	27		0001	.,,	0100		4757								
			OBS	0115	0477	34528	27:		0007	0//	0122		4713								
			STD	0125 0125	0604 0604	3479 34785	274		0007	066	0122		4770 4770								
			OBS	0135	0623	34822	274	40					4780								
			STD	0150	0597	3482	274		0006	775	0139		4772								
			08S 08S	0150 0170	0597 0570	34817 34814	274						4772 4764								
			085	0194	0619	34972	275						4790								
			STD OBS	0200 0200	0607 0607	3497 34972	275		0005	817	0170		4786								
			085	0204	0596	34970	279						4786 4782								
			085	0221	0605	34992	275					14	4789								
			STD OBS	0250 0250	0573 0573	3499 34988	276		0005	341	0198		4781 4781								
			OBS	0269	0548	34989	276	53					4774								
			STD OBS	0300	0546 0546	3499 34994	276		0005	030	0224		4778								
			085	0342	0500	34982	276						4778 4766								
			OBS	0380	0505	35010	277	70				14	+775								
			STD 085	0400	0473 0473	3498 34981	277		0004	377	0271		+765 +765								
			STD	0500	0447	3499	277	75	0004	125	0314		+771								
			OBS	0500	0447	34989	277		0001	0 / 0	0355		771								
			STD OBS	0600 0600	0433	3499 34990	277		0004	060	0355		+781 +781								
			STD	0700	0415	3498	277	78	00040	003	0395		+790								
			OBS STD	0700 0800	0415	34983 3498	277		00034	0.5./-	0425		790								
			085	0800	0400	3498	277		00039	704	0435		+801 +801								
			STD	0900	0393	3498	278		0003	950	0474	14	814								
			08s STD	0900 1000	0393 0380	34981 3497	278		00039	945	0514		+814 +825								
			085	1000		34973			0000	, 4 ,	0214		825								
			STD	1100	0375	3498	278		0003	959	0553		+840								
			085 STD	1100 1200	0375 0370	34975 3498	278		0003	984	0593		+840 +855								
			085	1200	0370	34975	278	3.2			J- 13	14	855								
			STD	1300	0370	3498	278		00046	070	0633		+871								
			OBS STD	1300 1400	0370 0363	34975 3498	278		00040	066	0674		871 885								
			085	1400	0363	34975	278	33				14	885								
			STD OBS	1500 1500	0363 0363	3498 34982	278		00040	097	0715		902								
			003	1300	0303	37702	218	33				14	7902								

															_		г —			
REFERE	ENCE				- 5	MARSDEN	STATION THE	ME YEAR	DRIGINA		DEPTH	MAX. DEPTH	OBSE	WAVE RVATIONS	WEA-	CLOUD		S.	NODC	
CTRY	ID.	CDDE	LATITU		NGITUDE SON	SOUARE				ATION JMBER	DOTTO M	OF S'MPL'S		HGT PER SEA	CODE	TYPE A MT	i	N	UMBER	
CODE	NO.			1/10	1/10		MO DAY HE		+ +	7	1053	10	04	8 2	X 2	0 3			0039	
318	8008	EV	4433	N 04	+856 W			50 1967	7 1 1 P 988					0121	1 75	, 0.5	ı	1		
						WAT		SPEED MET	(D+	VIS,	NO. OBS.	SPEC	IAL							
						COLDR	TRANS. DIR.	OR (mb		BULB COD	DEPTHS	DRZEKAY	A HUNS							
						DT	SD 06	529 14	42 061	056 6	23									
						101	30100	327 1	72 002					T				SI Da-Si		3
		MESSEN	RLCAST	CARD	DEPTH (m)	τ °c	s °/	SIGMA-T	ANOMALY-X10	7 DIN. N	SDUH VELOC		02 ml/l	PO4-P µg + 01/1	TOTAL-P	NO2-N ! ug - oi/l	ND3-N ND - al/l	yg - ot/	pН	C
		HR 1/1	약 ND.	TYPE	02,111				Alvomine: - arv	X 10 ³	7200	-		77		-		_		+
			_																	[]
		1	1	STD	0000	0427	3376	2679	0012620	0000										
		1.5	0	085	0000	0427	33759	2679			146									
				STD	0010	0428	3376	2679	0012624	4 0013										
				085	0010	0428	33761	2679			146									
				STD	0020	0428	3376	2679	0012633	3 0029										
		0.0	0.2	obs	0020	0428	33761	2679			146									
				085	0025	0428	33761	2679	001259	2 0031	146 3 146									
				STD	0030	0423	3376	2680	001239	2 003	146									
				085	0030	0423	33761 3374	2680 2682	001237	5 006										
				STD	0050	0379	33735	2682	001231	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		651								
				OBS STD	0075	0352	3376	2687	001196	7 009		644								
				0B5	0075	0352	33758	2687	00		146	644								
				085	0085	0350	33795	2690				645								
				085	0094	0411	34008	2701				675								
				STD		0369	3408	2711	000973	0 012		660								
				085	0100	0369	34079	2711				660								
				STD	0125	0307	3433	2736	000732	1 014		640								
				085	0125	0307	34325	2736	000587	7 015		640 653								
				STD		0320	3454	2752	000507	/ 015		653								
				QB5	0150	0320	34535 3459	2752 2756	000553	8 018		664								
				510		0324 0324	34590		000223	0 010		664								
				085	0200	0344	3464	2758	000540	2 021		681								
				5TE	0250	0344	34639					681								
				510		0395	3474	2760	000524	4 024	1 14	712								
				085	0300	0395	34735	2760				712								
				ST		0471	3492	2767	000482	3 029		763								
				085	0400	0471	34918					763								
				STI	0500	0450		2770	000454	7 033		771								
				OBS	0500	0450	34937					771								
				ST		0435	3494	2772	000447	7 038		781								
				085	0600	0435		2772	000434	6 042		787								
				STI		0410			000+34	10 072		787								
				085	0700	0410		2774	000441	3 047		806								
				ST	0800 0800	0415			000441			806								
				OBS STI	-	0390		2777	000421	8 051		812								
				085	0900	0390						812								
				ST	-	0386		2777	000426	8 059	6 14	827								
				085	1000	0386					14	827								
				085	1015	0386					14	830								
				000																

CTRY ID. CODE LATITE	DE LO	GITUDE 100	MARSDEN	STATION TIA	AE YEAR	ORIGINAT		DEPTH TO	MAX. DEPTH		WAVE RVATIONS	W£A-	CLDUD			NODC	7
CODE ND. CDDE	1/10	· '1/10 0 2	10" 1"	MD DAY HR			TIDN MBER	POTTON	OF S'MPL'S		GT PER SE	THER	TYPE AM			STATION NUMBER	
318008 EV 4435	N 04	903 W	149 49	04 09 1	68 1967	IIP 988	3	0430	04		8 2	X2	0 3			00/0	
			WAT		ND BAR	110 75110		NO.	SPECI		0 12 1	1 12	1 013	1	- 1	0040)
			CDLDR	TRANS. DIR.	OR IMP		WET COD		DBSERVA								
			DT		S30 13		56 6	18									
MESSENGR CAST	CARD					SPECIFIC VOLUME	1		T		·					_	
HR 1/10	TYPE	DEPTH (m)	T *C	s */	SIGMA-T	ANOMALY-XIG?	X 163	VELDO		2 ml/l	PO4-P µg = of/I	TOTAL-P ug - ot/l	NO2-N ug - ol/I	ND3-N 1/10-01/1	SI O4~S √lo - gų		Š
							-									-	+
' '	STD	0000	0116	3330	2669	0013604	0000	145	22		1 :					1	11
168	OBS	0000	0116	33298	2669			145									
	STD	0010 0010	0115	3330	2669	0013606	0014										
	OBS STD	0020	0115 0111	33297 3329	2669 2669	0013606	0027	145 145									
001	OBS	0020	0111	33294	2669	0015000	002	145									
	085	0025	0110	33293	2669			145									
	STD	0030	0103	3329	2669	0013603	0041										
	OBS STD	0030 0050	0103 -0062	33288 3333	2669 2680	0012506	0067	145 144									
	OBS	0050	-0062	33325	2680	0012306	000	144									
	STD	0075	-0002	3352	2694	0011252	0097										
	OBS	0075	-0002	33522	2694			144									
	STD OBS	0100 0100	0229 0229	3381 33810	2702 2702	0010534	0124										
	OBS	0105	0255	33853	2702			145 146									
	OBS	0111	0115	33810	2710			145									
	STD	0125	0132	3391	2717	0009091	0148										
	OBS STD	0125 0150	0132	33908	2717		- 1	145									
	OBS	0150	0412 0412	3439 34393	2731 2731	0007843	0170	146									
	OBS	0165	0574	34665	2734			147									
	STO	0200	0345	3442	2740	0007030	0207		-								
	OBS	0200	0345	34418	2740			146									
	OBS STD	0219 0250	0370	34540 3455	2747	0005054	0.300	146									
	OBS	0250	0324	34553	2753 2753	0005854	0239	146 146									
	STD	0300	0361	3466	2758	0005440	0267	_									
	OBS	0300	0361	34662	2758			146	97								
	STD	0400	0426	3481	2763	0005154	0320										
	OBS	0400	0426	34805	2763			147	43								

CODE ND. CODE	LATITUDE 1/10	LONGITUDE		STATION TIM (GMT)	YEAR	ORIGINATO	IION	DEPTH DEPTH DB	WAVE SERVATIONS	WEA- CLDUD	STATION	
318008 EV	4436 N	04905 W	149 49	04 09 17	73 1967	IIP 9889		0177 01 05	6 2	X2 0 3		
			W.A.		BAR	O. AIR TEMP.	2	NO. SPECIAL	10121	1 45 1 0 13	0041	
			CDLDR	DIR.	OR (mb	ER DRY W	VET CODE	OBS. DEPTHS OBSERVATIONS				
			DT	SD 06 S	530 12	5 050 0	44 6	12				
MESSENGR TIME O HR 1/10		PE DEPTH (m)	7 %	s */.	SIGMA-T	SPECIFIC VOLUME	₹ △ D DYN. M. x 10 ³	SDUND D2 mI/I		OTAL-P NO2-N 29 - 01/1 pg - 01/1	NO3-N SI D4-Si yg - ol/l yg - ol/l pH	S
												+
170		TD 0000	0032	3318	2664	0014080	0000	14482	1 1	'	' '	11
173			0032	33175	2664			14482				
	OE	STD 0010 SS 0010	0030	3318	2664	0014068	0014	14483				
		TD 0020	0030 -0016	33175 3315	2664	0011010		14483				
001			-0016	33150	2664 2664	0014043	0028	14463 14463				
	O E		-0035	33160	2666			14455				
		TD 0030	-0051	3316	2667	0013819	0042	14449				
	OB		-0051	33160	2667			14449				
	08		-0071	33223	2673			14442				
		TD 0050	-0068	3330	2679	0012683	0069	14446				
	OB		-0068		2679			14446				
	08	TD 0075 S 0075	-0022	3345	2688	0011747	0099	14474				
		10 0100	-0022 0040		2688			14474				
	OB		0040		2697 2697	0010944	0127	14508				
	08		0208		2713			14508				
		TD 0125	0198		2714	0009413	0153	14591 14588				
	OВ		0198		2714	0007413	0100	14588				
		TD 0150	0170		2720	0008834	0176	14580				
	08	S 0150	0170		2720	000000	0-10	14580				

REFERENCE SHIP CODE LATITUE	DE LON	IGITUDE E	MARSDEN SOUARE	STATION TI (GMT)	YEAR		TION	DEPTH DEPTH OF S'MPL'S	OBSERVATIONS DIR. HGT PER SE		MT .	JON TAT2 MUM	ION
318008 EV 4437	N 04	912 W 1	49 49	04 09 1	180 1967			0055 00	04 8 2	X2 0	3 l	1 00	42
1 310000 21 1 1 1 1 1			WAT	ER V	IND BAR		V15.	NO. SPECIA					
			COLOR	TRANS. DIR.	SPEED MET DR FDRCE (mb		ULB CODE	DEPTHS OBSERVAT	TIONS				
			DT	SD 06	530 12	25 050 0)44 6	05					
MESSENGR CAST	CARD TYPE	DEPTH (m1	7 °C	s °/	SIGMA-T	SPECIFIC VOLUME	₹ △ D DYN. M. x 10 ³	SOUND C	PO4∞P pg = 01/1	101AL-F NO2-		21 O4-\$i h8 - 01/1	рн с
HR 1/10													
	STD	0000	-0063	3312	2664	0014086	0000	14438					
180	085	0000	-0063	33121	2664			14438					
	STD	0010	-0064	3312	2664	0014070	0014						
	085	0010	-0064	33122	2664	001/00/	00.70	14439 14438					
	STD	0020	-0070	3313	2665 2665	0014006	0028	14438					
001	OBS	0020	-0070 -0076	33127 3314	2666	0013918	0042						
	STD	0030	-0076	33135	2666	0013710	50 12	14437					
	STD	0050	-0086	3321	2672	0013337	0069	14436					
	QBS	0050	-0086	33205	2672			14436					

														1				T				
	NIP ODE	LATITUT	.	GITUDE E SON	MARSOEN SOUARE	M O	ATION T		YEAR		TATION BE	v .	TO TO TO TO M	DEPTH OF S'MPL'S		WAVE SERVATIONS HGT PER SE	WEA- THER CODE	CLOUD CODES	}	ST.	ODC ATION JM8ER	
	-		1/10			_			1967	IIP 98	91		084	01	30	8 2	X 2	03			043	
318008	EV	4417	2N 04	9130W		ATER		WIND	T	137 SIA			NO.		CIAL							
					1	R 194		SPEED	BAR	ER DRY	WET		OBS. DEPTHS	DASERY	ATIONS							
					coc		NS. DIR.	FORCE	(mbs	1 BULB	BULE											
					D1	,	0 31	535	15	2 028	02	2 6	10			L						П
	ESSENGR TIME C	CAST NO.	CARO TYPE	DEPTH (m)	1 °C		s ·/.	SIG A	4A-T	SPECIFIC VOLU		₹ △ D DYN. M. X 10 ³		OCITY	O 2 ml/	PO4-P µg = 01/1	FOTAL-P µg-ai/l	NO2-N μg - σ1/1	NO3-N NG - 01/1	\$1 O4-\$i pg + al/1	рН	S C C
н	R 1/10	-																	1			
			STD	0000	0270	1	3346	26	71	001346	2	0000	14	592								
	204		085	0000	0270		33460	26	71					592								
	20-	_	STD	0010	026		3346	26		001345	0	0013		593								
			085	0010	026		33459				_			593								
			STD	0020	025		3345	26		001344	9	0027		+588 +588								
	00	l	085	0020	025		33445							+593								
			OBS	0027	026		33482			001323	2.3	0040		1586								
			STD	0030	024		3347	26		001723	1	0040		+586								
			OBS	0030	024		33465	_	73					+575								
			085	0040	021		33439		88	001182	2 2	0065		4713								
			STD	0050	052	-	3400 3400:		88	001102		0000		4713								
			085	0050	052 055		34100		93					4729								
			085	0060	054	-	34090		93				14	4726								
			085 085	0065 0070	055		3414		96					4731								

REFERENCE SHIP		- E	MARSDEN	STATION TI		ORIGINA	ATOR*S	DEPTH	MAX. DEPTH		WAVE	WEA-	CLOUD			NODC]
CTRY ID. CODE LATITU	1/10 LON	GITUDE TOOM	SQUARE 10° 1°	IGMT)	YEAR	CRUISE S	TATION	MOTTOR	OF		ERVATIONS	THER	CDDES			TATION	
				MO DAY H					S.Wbr.2		HGT PER SEA	-	TYPE AMT			TOMBER	
31 8008 EV 4414	19N U4	9000W	149 49 WAI		16 196	7 11P 98		0667	06	32	6 2	X 2	0 3			0044	
			COLOR		SPEED BAR	(U-	V15.	NO. OBS.	SPEC	IAL							
			CODE	TRANS. DIR.	OR Imb		BULB COD	DEPTHS	OBSERVA	(110142							
			DT	SD 31	S25 16	59 022	017	31									
MESSENGR CAST	CARD					SPECIFIC VOLUM		_			100 0						1.
TIME OF NO.	TYPE	DEPTH (m)	1 °C	s */	SIGMA-T	ANOMALY-XIO	ME S A D DYN. M X 103	. AETO		O2 ml/!		P J ATOT	NO2-N ug - ot/i	ND3-N ug - ot/l	SI O 4-5 yg - o1/		Š
HX 1/10				 			- 1	-	_							-	+
1 1	STD	0000	-0024	3301	3463	001500	, ,,,,,,,				1	- 1	- 1			1	[+
216	OBS	0000	-0024	33009	2653 2653	001509	4 0000	144									
-10	STD	0010	-0025	3301	2653	001507	9 0015										
	OBS	0010	-0025	33010	2653			144									
	STD	0020	-0025	3302	2654	001501	4 0030	144	+57								
004	OBS	0020	-0025	33018	2654			144									
	0BS STD	0025 0030	-0025 -0025	33023 3310	2655 2661	001/20		144									
	OBS	0030	-0025	33100	2661	001438	4 0045	144									
	OBS	0041	-0040	33270	2675			144									
	OBS	0045	-0019	33385	2683			144									
	STD	0050	-0041	3343	2688	001178	8 0071	144	160								
	085	0050	-0041	33430	2688			144									
	STD	0075	0011	3361	2700	001065	3 0099										
	08s 08s	0075 0085	0011 0072	33609 33770	2700 2710			144									
	STD	0100	0573	3451	2722	000870	5 0123	145									
	OBS	0100	0573	34510	2722	000010	0123	147	-								
	OBS	0110	0657	34650	2722			147									
	STD	0125	0595	3456	2723	000865	5 0145										
	OBS	0125	0595	34557	2723			147									
	STD OBS	0150 0150	0806 0806	3499 34990	2728 2728	000831	9 0166										
	OBS	0190	0735	34924	2733			148 148									
	STD	0200	0655	3484	2738	0007396	0205										
	OBS	0200	0655	34843	2738			148									
	OBS	0205	0551	34731	2742			147	761								
	OBS	0730	0538	34778	2748			147									
	STD OBS	0250	0450	3466	2749	000633	2 0240										
	OBS	0250 0261	0450 0375	34662 34636	2749 2754			147 146									
	STO	0300	0471	3482	2759	000544	0269	147									
	OBS	0300	0471	34820	2759	3002	0-07	147									
	OBS	0302	0483	34837	2759			147									
	OBS	0323	0468	34816	2759			147									
	OBS	0340	0487	34875	2761			147									
	OBS OBS	0350 0392	0400 0399	34775 34810	2763			147									
	STD	0400	0410	34810	2766 2766	0004836	5 0321	147 147									
	OBS	0400	0410	34824	2766	0004036	0 0 2 1	147									
	OBS	0415	0428	34848	2766			147									
	STD	0500	0440	3492	2770	0004565	0368										
	OBS	0500	0440	34919	2770			147									
	STO	0600	0437	3494	2772	0004501	0413										
	OBS OBS	0600 0630	0437 0427	34937 34935	2772 2773			147									
	003	0030	0427	34733	2113			147	0.3								

REFEREN	CE	SHIP					± 5	MARSOEN SOUARE	STATION	TIME	YEAR		ORIGIN	ATOR'S		DEPTH	MAX. DEPTH	OBS	WAVE ERVATION	S	WEA-	CLOUD			NOU	ON
CTRY L	0.	COOE	LATITU	DE 1/10	LONG	1/10	DRIFT	10° 1°		HR,1/1	_	U.S		NUMBER		воттом	S.WbF.	DIR	HGT PER	\$EA	CODE	TYPE AM	ī		NUM	BER
3180	008	EV	4412	5N	048	460W			04 22	231	196	7 1	11P 98			1920	15	32	6 2		X 2	0 3			00	45
,								COLOR		GNIW		ARO- ETER	AIR TE	MP, °C	VIS.	NO. OBS.	SPE	CIAL								
								CODE	TRANS. DI	R. O	R ICE (r	mb=)	BULB	BULB		DEPTHS										
								DT	SD 3	1 52	0 1	186	011	006		30	L.,			_				_	_	
		MESSENGR TIME	CAST	CAR		DEPTH	(m)	T *C	s */.	. s	IGMA-T	r SP	PECIFIC YOUR	IME D	△ D YN, M. X 10 ³	SO VEL	OCITY	02 ml/3	PO4-P	1 10	DTAL-P	NO2-N ug - al/i	NO3-N	SI O.		ρН
		HR 1/10	NO.	TYPE								-		-	X 103	+	-		-	+	-			+		
					.	000	^	0018	3315	١,	2663	- 1	001418	LA C	000	14	476		ı	1	ı		1	,	'	
		23	1	S1 089		000		0018	3315		2663	,	001-10	, ,		14	476									
		٤.	•	\$1	rD	001	0	0017	3316		2663	-	001413	35 0	014		477									
				089		001		0017	3315 3316		2663		001411	10 0	028		478									
		00	5	08		002		0017	3316	1 2	2664						478									
				S		003		0015 0015	3317 3317		2 6 65		001402	22 (042		+479 +479									
				089		003		0015	3329		2674					14	4495									
					T D	005	0	0009	3345		2687		001189	90 (0068		484									
				08:		005		0009 0018	3344		2687 2694						4484									
				08:		007		0010			2702					14	+512									
					TD	007		0053			2705		00101	81 (096		4511 4511									
				08		007		0053 0046			2705 2709						4510									
				08: S	5 TD	010		0380	343	7	2733		00076	49	118		4668									
				08	S	010		0380			2733		00077	1/1	0137		4668									
				S 08	TD	013		0700 0700			2733 2733		00077	14 '	,,,,		4809									
				08		01		0730	349	48	2736				- 1		4823									
					ŢD	01		0699			2740 2740		00071	46	0156		4814 4814									
				08	S TD	01		0699 0598			2747		00064	63	019	0 1	4781									
				08		02		0598	348		2747						4781									
				08		02 02		0515 0570			2751 2756		00056	61	022		4749 4779									
				08	TD S	02		0570			2756					1	4779									
				S	QT	03		0496			2762		00051	33	024		4757 4757									
				08	S	03		0496 0485			2762 2769		00045	77	029		4769									
				08		04		0485	349	73	2769	7			-2.		4769									
					TD	05		0440			2773 2773		00042	60	034	-	4767 4767									
				08	STD	05 06		0440			2775		00041	59	038	2 1	4770									
				0.8	35	06	00	0408	3 349		2775		000/-1	2.0	043		4770									
				08	TD.	07 07		0391			2776		00041	20	042		4779									
					55 5TD		00	038			2777		00040	199	046	5 1	4795									
				0.8	35	08	00	038			2777		000/-3	1.2	050		4795 4810									
				08	370	-	00	0383			2778		00041	13	0.50		4810									
					55 5TD		00	0379	9 349	4	2778	В	00041	155	054		4825									
				08	35		00	037			2771		00042	223	058		.4825 l4841									
					STD BS		00	037			277		000+2	- 2 3	0.00	1	4841									
					5 T D		00	037	4 349	5	277	9	00042	247	063	_	4856									
				01	BS		00	037			277		00042	265	067		l 4856 l 4875									
					STD BS		00	037			278		000+2		001	1	14875	i								
					STD	_	00	037	0 349	6	278	1	0004	279	071		14888									
					BS		00	037			278 278		0004	335	076		14888 14904									
					STD 85		00	036 036			278		0004.		Ų . C		14904									
				Ų	05	1.	.00	0,0	, , , ,			-														

REFERENCE	_	SHIP	LATITU	0.5	LONGITUDE	CTR	MARSOEN SQUARE	STATION TI	WE	YEAR		NATOR'S		OEPTH	MAX. DEPTH	08	WAVE SERVATIONS	WEA-	CLONO			NOOC
CODE NO).).	3000		1/10	1/10	DRIFT		MO I DAY IH		15.00	CRUISE NO.	NUMBER		80110M	OF S'MPL"		HIGH PER SE	0000	TYPE AM			UMBER
31800	08	EV	4410	ON	048324W			04 23 (1967	11P 9	894		3109	15	31	6 2	X 2	0 3	1		0046
				0.11		' '	WAI		/INO	BARC	4 10 7	EMP. °C	VIS	NO.		CIAL		1 12	. 0.3		'	0040
							COLOR	TRANS. DIR.	SPEED	METE	R ORY	WET BULB	CODE	OBS. OEPTHS	OBSERV							
							_		FORCE			+		28								
							DT	50 31	510	20		000		Ť								
		TIME O	CAST NO.	CARD	DEPTN	(m)	7 °C	s °/	SIGA	AA-T	ANOMALY-	UME O	∆ 0 yn. M		DCITY	02 ml/	PO4-P µg = 01/I	TOTAL-P pg - o1/I	NO2-N pg - at/1	NO3→N vg - oi/I	\$1 O4-Si pg - e1/I	pH
	Н	R 1/10						-	+				X 10 ³	+		-	-			7.	-	-
	- 1) D 000		0477	3379	26	74	00129	12 (000	1.6	684 		1			I	Ī	ı
		009		ST OBS	000		0477	33787	26		00129	22 (000		684							
		00,		ST			0477	3379	26		00129	10 0	013		686							
				085	001		0477	33790	26						686							
		0.0		ST			0477	3379	26		00129	05 0	026		688							
		004		OBS OBS	002		0477 0477	33792 33795	26 26						688 689							
				ST			0477	3380	26		00128	77 0	039		690							
				OBS	00	30	0477	33797	26	77				14	690							
				ST			0410	3417	27		00094	12 0	061		670							
				OBS OBS	005		0410 0672	34169 34737	27 27						670 786							
				ST			0687	3483	27		00077	58 0	082		795							
				085	00		0687	34825	27						795							
				ST			0699	3490	27		00074	00 0	101		805							
				oBs	010		0699	34900	27		00070				805							
				ST OBS	D 012 013		0713 0713	3498 34982	27 27		00070	20 C	119		816 816							
				ST			0661	3497	27		00064	69 (136		799							
				OBS	015		0661	34968	27						799							
				ST			0582	3494	27		00057	27 (167		776							
				OBS ST			0582 0493	34942 3486	27 27		00053	60 0	195		776 747							
				085	025		0493	34857	27		00000	00 (747							
				OBS	02		0465	34840	27					14	738							
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				OBS	030		0474	34887	27						747							
				OBS ST	035 0 040		0505 0502	34950 3499		65 69	00046	22 (268		769 7 77							
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				ST			0464	3498		72	00043	91 (313		777							
				085	050		0464	34980	27		000/3		25.		777							
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				ST			0433	35001	27		00040	97 (398		798							
				OBS	070	00	0433	34999	27	77				14	798							
				ST			0418	3500	27		00040	48 0	439		808							
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				085			0395	34976	27		00040	(815							
				ST			0380	3496	27		00040	41 (519		825							
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				ST			0375	3496		80	00040	69 (560		840							
				0BS ST	110 0 120		0375 0375	34960 3496	27	80	00041	27 (601		840 857							
				085	120		0375	34964		80	00041	- 1			857							
				ST	D 130	0 (0368	3496	27	81	00041	47 (642	14	870							
				OBS	130		0368	34961	27						870							
				ST			0365	3497 34966		82	00041	57 (684		886							
				OBS ST			0365 0361	34966		82	00041	59 (725		886 901							
				OBS			0361	34970		82	00041	- , (901							
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REFERENC	E SHIP			# T	MARSOEN SQUARE	STATION TIM	E YEAR		GINATO	$\overline{}$	DEPTH	MAX. OEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUG		S	ODC ATION	
CODE NO	CODE	LATITU	1/10 LON	GITUOE SON		MO OAY HR.		CRUISE NO.	NUM	BER	MOTTON	OF S'MPL'S		HGT PER SEA	CODE	TYPE AM1		N	UMBER	
31800	-	4407		8190W		04 23 0	25 1967		9895		3383	15	31	6 2	X 2	0 3			0047	
1 - 2,- 0					WAT		NO BAR	0.	TEMP.	VIS.	NO. 085.	SPEC								
					COLOR	TRANS. OIR.	OR IMB			LB CODE	DEPTHS	OBSERV	ATIONS							
					DT	SD 31	510 21	7 01	7 0	06 6	38									
	MESSENG	R CAST	CARO		T *C	5.4/	SIGMA-T	SPECIFIC V	OLUME	₹ △ D DYN, M x 10 ³	so	ONU	O 2 ml/l		TOTAL-P	NO2-N	NO3-N	5104-51	pH	S C
	HR 1/1	y NO.	TYPE	OEPTH (m)	1 0	s */	31GMA-1	ANOMAL	Y-X107	x 10 ³	. AET	OCITY		μg = 01/1	µg = 01/1	ا/اه - وبر	µg - a!/l	h8 - 01/[C
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	'		STD	0000	0250 0250	3351 33505	2676 2676	0012	963	0000		584								
	0.2	5	OBS STD	0000 0010	0255	3351	2676	0012	969	0013		588								
			OBS	0010	0255	33510	2676	0010		0036		588								
	0.0	12	STD OBS	0020 0020	0255 0255	3351 33514	2676 2676	0012	1943	0026		590 590								
	00	,,	STD	0030	0256	3352	2676	0012	940	0039		592								
			085	0030	0256	33516	2676	0013	2026	0065		+592 +596								
			STD OBS	0050 0050	0257 0257	3352 33519	2676 2676	0012	.734	0063		+596								
			oBs	0063	0287	33570	2678					+611								
			STD	0075	0260 0260	3370 33695	2690 2690	0011	1640	0095		+603 +603								
			OBS OBS	0075 0085	0188	33845	2708					+576								
			STD	0100	0500	3430	2714	0009	9431	0122		4717								
			085	0100	0500 0650	34300 34701	2714 2727					+717 +787								
			OBS STD	0120 0125	0630	3468	2728	0008	3160	0144	14	4779								
			085	0125	0630	34682	2728					4779								
			08S 0BS	0135 0141	0590 0732	34620 34960	2729 2 736					4764 4826								
			STD	0150	0670	3485	2736	000	7465	0163	3 1	4801								
			OBS	0150	0670	34850	2736 2737					4801 4776								
			obs obs	0155 0161	0608 0650	34752 34825	2737					4795								
			085	0175	0560	34680	2737					4759								
			OBS STD	0195 0200	0591 0596	34750 3480	2739 2742	0006	6959	0199		4776 4779								
			OBS	0200	0596	34800	2742				1	4779								
			OBS	0217	0599	34946	2753					4785 4781								
			OBS STD	0240 0250	0578 0597	34950 3499	2756 2757	000	5627	023		4791								
			085	0270	0618	35050	2759					4803								
			STD	0300	0609 0609	3507 35069	2762 2762	000	5264	025		4805 4805								
			OBS OBS	0300 0370	0488	34890	2762					4765								
			OBS	0382	0494	34965	2768	000		0.40		4770								
			STD OBS	0400	0485 0485	3497 34965	2769 2769	000	4636	0 5 0		4769 4769								
			STD	0500	0433	3493	2771	000	4433	035		4764								
			OBS	0500	0433	34926	2771	000	4201	039		4764 4775								
			STD	0600	0420 0420	3494 34940	2774 2774	000	4281	009		4775								
			STD	0700	0400	3492	2775	000	4267	043		4783								
			085	0700	0400		2775 2776	000	4229	048		4783 4795								
			STD 085	0800	0388 0388		2776	000	1269	5 , 0	1	4795								
			OBS	0865	0402	34960	2777			0 5 0		4812								
			STD	0900 0900	0383 0383		2777 2777	000	4180	052		4809								
			085 STD		0385		2779	000	4160	056	5 1	4827								
			085	1000	0385			000	4193	060		4827								
			STD OBS	1100	0390 0390		2779 2779	000	7173	000		4846								
			STD	1200	0383	3497	2780	000	4218	064		4860								
			OBS	1200	0383 0379		2780 2781	000	4219	069		.4860 .4875								
			ST0 085	1300 1300	0379						1	4875								
			STD	1400	0374	3497	2781	000	4249	073		4890								
			OBS	1400 1500	0374 0363		2781 2781	000)4258	077		4890 4902								
			STD 085	1500	0363					-		14902								

	REFER	RENCE					ox	MARSDEN	STATION TH	AF		ORIGIN	ATOR'S		DERTH	MAX.		WAVE	T w.r.	CLOUD				1
Watte Section Sectio	CIRY	Ib.	CODE			NGITUDE 1/10	INDCT	SOUARE			rear (CRUISE	STATION		DEPTH TO BOTTOM	DEPTH		ERVATIONS		COOES	ī	S	NODC TATION UMBER	
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The color The								COLOR	TRANS. DIO	SPEED	METER	ORY	WET	VIS,	OBS.	SPE	CIAL							
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CTRY		300	LATITU	1/10		1/10°	IN ORIE		MO E		_		NO.	N	UMBER	_	BOTTON	S'MPL		HGT PER	SEA	CODE	TYPE A M		-	NUMBER	
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PEFERENCE SH		ATITUDE	LOI	AGITADE SOUTH	MARSDEN SOUARE	STATION	TIME	YEAR	_	RIGINA	TOR'S		DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA-	CLOUG			NODC TATION	
CODE NO.	DE		10	· '1/10 0 Z	10° 1°	MO DAY	HR.1/10		CRUISE NO.		UMBER		воттом	OF S'MPL'S		HGT PER SE	COOF	TYPE AM		N	UMBER	
31 8008 E	V 4	35881	N 04	7320w	149 37	04 23	075	-		989			4023	15	31	4 2	X2	0 3			0050	
					COLOR	TRANS, D	R. SPEE		R C	ORY JLB	WET	CODE	NO. OBS. DEPTHS	OBSERV	ATION S							
					DT	SD 3	0 50	-		44	022	7	33									
MES:	SENGR C	TZAS	CARD TYPE	DEPTH (m)	T *C	s °/.	, sı	GMA-T	SPECIFIC	VOLUA	ĄĘ Š	△ D.	SOL	IND	O2 ml/I	PO ₄ -P	TOTA L-P	NO ₂ -N	NO3-N	SI 04-SI	рН	S.
HR	1/10	NO.	TYPE						ANOM	ALY-X10	X	103	, AETC	OCITY		yg - 01/1	\10 - gu	νg - αΙ/Ί	μg - ot/1	yg - al/l	pri	č
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		(OBS	0010	1248	3525	9 2	672					14	996								
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			STD OBS	0030	1248 1248	3526 3526	2	672 672	001	3434	+ 00	040	14	999								
			STO	0050	1248	3526	2	672	001	3465	5 00	067	15	999 003								
		(OBS STD	0050 0075	1248 1248	3526 3527		672 672	001	3523	3 0	101		003 007								
		(OBS STD	0075 0100	1248 1247	3526 3528	5 2	672					15	007								
			OBS	0100	1247	3527	9 2	673 673	001	346	, 0.	135	15	011 011								
			OBS OBS	0109 0117	1237 1254	3529 3533		676 676						009 017								
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			STO	0300	0880	3504	2	720	000	9333	3 0	366	14	909								
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			STD 085	1200	0393	3497 3497	2	779	000	4306	0 6	338	14	864								
			STD	1300	0381	3496	2	779 780	000	4296	5 08	881	14:	864 876								
		(OBS STD	1300 1400	0381 0372	3496 3496		780 780	000	4304	. 09	924	148	876 889								
		(OBS	1400	0372	3495	8 2	780					148	889								
		(STD OBS	1500 1500	0368 0368	3496 3496		781 781	000	4323	, 05	68	149									

																								ı
REFERENC	E	SHIP			LONGITUE	CI &	MARSDEN	STATION TIM		EAR	ORIGIN		_	DEPTH	MAX. DEPTH	OBSE	WAVE RVATIONS		WEA-	CLOUD		5	NOOC	
CODE NO	۱. [ر	BOOE	LATITU	1/10		INDCT.		MO DAY HR			NO.	TATIO	R	воттом	OF S'MPL'S	OIR.	HGT PER S	EA (CODE	TYPE AMT		1	N U ANBER	
3180	08	EV	4356	5N (04719	OW	149 37	04 23 0	97 1	967	11P 98			4206	15	33	4 2		x2	0 3			0051	
1 3 1 0	-1						WAT		ND SPEED	BARO				NO. OBS.	SPEC	TAL								
							COLOR	TILANS. DIR.	OR	(mbs)		BUL	CODE	OBS. OEPTHS	OBSERV	ATIONS								
							DT	50 30	S05	220	0 050	03	3 7	40										
	[FSSENGR	Taver	CARD							SPECIFIC VOLU	ME	₹ Δ o	501	UND	O2 ml/l	PO4-P			NO2-N	NO ₃ -N	\$104-5		S
	Ι.	TIME	NO.	TYPE	DE	PTH (m)	τ ℃	5 -/	SIGM	A-T	ANOMALY-XI	0'		VELO	OCITY	0211177	yg + a1/1	ηĝ	• 01/1	µg − αI/I	µg - al/l	pg - q1/	1	C
	ľ	17 17	1																1					
	- 1		'	ST	ם מ	0000	1272	3537	267		001302	7	0000		004									
		09	7	OBS		0000	1272	35367	267 267		001303	2	0013		004									
				ST OBS	_	010	1272 1272	3537 35370	267		001303	2	0015		006									
				ST		020	1272	3537	267		001305	9	0026		007									
		00	3	OBS		0020	1272	35370	267						007									
				08S ST		0025	1272 1273	35370 3537	267		001309	0	0039		009									
				OBS		0030	1273	35372	267						009									
				ST	0 0	0050	1273	3537	267		001313	17	0065		012									
				OBS		0050 0075	1273 1274	35373 3538	267		001320	1	0098		012									
				ST OBS	_	075	1274	35376	267		001520	•	33,0		017									
				ST		0100	1276	3539	267	76	001324	0	0131		022									
				OBS		0100	1276	35385 35425	26						022									
				OBS ST		0113	1289 1218	3531	261		001276	. 3	0164		005									
				085		0125	1218	35310	261			-		1.5	005									
				OBS	5 (0140	1294	35521	261		00126		0100		036									
				ST		0150	1290 1290	3552 35522	261		001264	+ U	0196		036 036									
				08s		0150 0200	1276	3553	26		00124	+6	0258		040									
				089		0200	1276	35530	26			_			5040									
				ST		0250	1116	3532	27		00111	o 7	0317		4990 4990									
				0B9	_	0250 0264	1116 1096	35318 35354	27						4986									
				0B3	_	0272	1096	35354	27						4987									
				S1	TO	0300	1014	3519	27		00104	36	037		4961									
				089	_	0300	1014 0956	35190 35160	27 27						4961 4944									
				0B3		0330	0967	35218	27						4950									
				51	T D	0400	0838	3502	27		00090	48	046		4910									
				083	_	0400	0838	35019 34970	27 27						4910 4869									
				08: 08:	-	0420	0726 0744	35005	27						4878									
					TD	0500	0630	3500	27		00063	58	054		4845									
				0B:	_	0500	0630	34998							4845 4841									
				0B:	_	0520	0610 0627	35018 35050	27 27						4848									
					†D	0600	0566	3502		63	00054	83	060		4836									
				OB:	S	0600	0566	35020		63					4836									
				0B:	_	0660	0550 0530	35029 35028		66					4840 4833									
				0B:	TD TD	0700	0530	3505		70	00049	36	065	7 1	4839									
				08	S	0700	0530	35048		70					4839 4837									
				08		0762	0501 0508	35047 35057		73					4837 4841									
				0B.	S TD	0800	0503	3506		74	00046	06	070	5 1	4844									
				08	S	0800	0503	35062		74	00010	0.0	0.75		4844									
					TD	0900	0458			77	00043	УŲ	075		4842 4842									
				0B 0B		0900	0458 0463			77				1	4848									
					TD	1000	0450	3503	27	778	00043	73	079		4855									
				ΟВ	S	1000	0450			778	00043	1.2	083		4855 4863									
				S 0B	070	1100	0429			779 779	00043	12	003		4863									
					510	1200	0412	3501	27	780	00042	52	088	0 1	4873									
				08	s	1200	0412			780	000/	0 6 5	092		.4873 .4884									
					STD	1300	0400			781 781	00042	.00	092		4884									
				08	55 570	1400	0395			781	00042	92	096	5 1	4899									
				08	35	1400	0395	35000	21	781					4899									
				S	510	1500	0390			783	00042	250	100		14914 14914									
				Q.B	35	1500	0390	35009	, 2	100				,	- + / 1.4									

REFERENCE CTRY ID. CODE ND.	SHIP	LATITU	DE 1/10	LONGITUDE	DRIFT	MARS SQU	ARE	_	TION T (GMT)		YEAR		RUISE !	ATOR'S STATION		DEPTH TO BOTTON	MAX. DEPTH OF S'MPL'			VE ATION:		ER (CDDES		12	NODC TATION UMBER	
31800	EV	4419	N	04920 W		149	49	04	24	174	1967	7]	IIP 99	00		0048	00	26	6	2	Х	1	0 3			0052	
							WAI	ER	٧	VIND	BAR	10-	AIR TE	мр. ℃		NO.	CDE	CIAL									
							COLOR	TRAMS (m)	DIR.	SPEED OR FORC	MILL		DRY BULB	WET SULE	COD!	OBS. DEPTHS	OBSERV										
							DT	SD	24	517	0 9	91	056	050	7	05											
	MESSENGR TIME HR 1/10	NO.	CARD TYPE		m)	T	℃	2	٠/	SIG.	MA-T	192 A	ECIFIC VOLU	02 0	∆ D YN. M X 10 ³		DCITY	D ₂ ml/l		04-P 9-01/1	TOTAL		02-N 1- ot/1	ND3~N yg = ol/l	\$1 O4-\$i pg = 01/1	рН	S
	00		ST OBS ST OBS ST OBS ST OBS	000 D 001 001 D 002 002 0 003 003	0 0 0 0 5 0 0	0 0 0 0 0	226 226 221 221 211 206 342 342 348	32 32 32 32 33 33	88 883 88 883 99 039 65 650	26 26 26 26 26 26	28 28 28 28 38 42 79 680	c	001749 001745 001660 001265	9 0	0000 0017 0035	14 14 14 14 14	565 565 565 565 563 563 631 631										

CTRY ID.	SHIP	LATITU		LONGITUDE TO	MARSDEN		TION TI	٧	/EAR		TOR'S ATION UMBER	DEPTI	OF OF	085	WAVE SERVATIONS	WEA- THER CODE	CLOUD		51	ODC ATION JABER	
	BEV	4436	1/10	1710	10° 1		DAY H		0/7	 		+	3 741 F L	1	HGT PER SE	1	ITTE AM		_		
31/8008	ol EA I	4416	N (04906 W	149 4	9 04		184 1	967	A ID TEAM		034	8 03	22	6 2	X0	0 3	I		0053	
					COI		_	SPEED	BARG	R DRY	WET CO	UE D 97	OBCEN	VATIONS							
					CO		-	FORCE	lmbs	ii BULB	BULB	DEFIR	12								
					D	T S	22	518	10	8 067	056 7	23									
	MESSENGR TIME HR 1/10	및 NO.	CARD TYPE	DEPTH (m)	1 °C			SIGMA	A — T	SPECIFIC VOLUM		M. VE	OUND	O ₂ m1/1	PO4-P ug = 01/1	TOTAL-P yg = a1/1	NO2-N ug - at/l	ND3-N µg - al/l	SI O4-Si pg = al/l	рН	SCC
			STI		-001		299	265		0015263	000		4459								
	18	4	OBS ST	0000	-001 -001		2993	265 265		0015261	001		4459 4458								
			085	0010	-001		990	265		0013201	. 001		4458								
			ST		-002		299	265		0015245	003		4459								
	0.0	1	OBS	0020	-002		990	265					4459								
			OBS	0025	-002		2999	265		0015015			4457								
			STI	0030	-003 -003		301 3012	265 265		0015015	004		4454 4454								
			ST		-005		307	265		0014495	007		4451								
			OBS	0050	-005		3071	265				1	4451								
			OBS	0065	-008		3260	267			1 -		4438								
			STI OBS	0075	-007 -007		332	268 268		0012473	010		4446								
			STI		-005		340	268		0011936	013		4461								
			OBS	0100	-005		3400	268		0011/30	, 0-3		4461								
			ST		-002		354	269		0010970	016		4481								
			OBS STI	0125	-002 002		3542	269		001030			4481								
			085	0150	002		366 3661	270 270		0010296	019		4509 4509								
			085	0180	016		053	272					4586								
			085	0196	065		721	272	9				4799								
			STI		065		+74	273		0008102	024		4801								
			OBS OBS	0200 0210	065 065		+741 +760	273 273					4801								
			085	0210	043		585	274					4803 4714								
			OBS	0245	042	-	597	274					4716								
			ST		040		+62	275		0006163	027		4707								
			OBS	0255	039		640	275					4703								
			0BS 0BS	026B 0283	042		683	275 274					4718 4718								
			085	0290	037		1645	275					4699								
			ST		036		166	275		0005544	+ 030		4700								
			085	0300	036		659	275					4700								
			OBS	0325	035	5 34	+666	275	9			1	4699								

REFERENCE	SHIP	LATITU	26	LONG	וזטסנ	CTR	MARSDEN SQUARE	STA	TION TI	ME	YEAR	CRUISE	DRIGINA	TOR'S		OEPTH	Luck	HIP	0851	WAVE RVATIONS	WEA	CODE	5		NOT	ION	
CTRY ID.	CODE	LAIIIU	1/10	LONG	1/10	DRIFT			DAY H			NO.	N	UMBER		OTTO	S.W.	br.2	-	HGT PER SE		11176 147			NUN	-	
31800	8 EV	4414	N	048	54 W		149 48	04		197	1967		990	_		182°	1	15	,	5 2	×0	013			00	54	
							COLOR	TRAN	S. Die	SPEEL		ER (DRY	WET	CODE	OBS. OEPTH		SPECI.	AL TION S								
							CODE	lm		FORC			50	039	7	34	+-		\dashv								
							DT	5	D 22	510	5 11		C VOLU		A D	T-	OUNO	\top		PO4-P	TOTAL	P NO2-N	NO3-N	SIO	i2-si	ρΗ	S
	MESSENG	T NO.	CAI		DEPTH	(m.)	t °C		5 %.	210	MA-T	ANOM	ALT-XIC	, D	yn. M x 10 ³	· VE	LOCITY	' ') 2 m1/l	yg = 01/1	yg - 01/			hð -	al/l	рл	č
	HR 1/1	1						1								Τ.									1		
	'	_		TD	000		0069 0069		324 3236		667 667	001	1380	6 0	000		4500										
	19	7	0B S	TD.	001		0066	3	324	2	667	001	1378	9 0	014	. 1	4501	0									
			08		001		0066 0046		3236 328		667 672	001	1334	7 0	027		4500										
	0.0	4	08	TD S	002	0	0046	3	3280	2	672					1	449										
			08		002		0046 0046		3332 345		676 685	001	1204	2 0	040		449										
			0.8		003	30	0046	3	3451	2	685					1	449	7									
			0 E	STD Rs	005		0084		360 3600		695 695	001	1111	9 (063		452										
			5	TD	007	75	0074	3	380	2	712	000	0954	0 0	089	1	452 452	2									
			08	SS STD	007		0074		3800 390		712 719	000	0889	6 0	112		453										
			0.6	35	010	0	0093	3	3900	2	719	0.0	0001	0 (1122		453										
			O E	3TD	012		0150 0150		4062		728 728	000	0804		133		456										
				STD	015	50	0190	3	418	2	734	000	0745	6 (153		459 459										
			06		019		0190 0335		4180		734 746						466										
			5	STD	020	0.0	0327	1	3450	2	748	00	0624	3 ()18		466										
			01		020		0327 0318		34500 34570		748						l 466 l 466										
			:	STD	0.2	50	0340		3464	2	758	00	0537	78	021		1467										
				BS STD	02		0340		34637 3474		758 761	00	0518	36	024		1467 1471										
			01	BS	03	00	0393	:	34740) 2	761						1471 1470										
				BS BS	03		0380		3474(34795		762 763					1	1472	25									
			01	BS	03	40	0410) :	34840		767						1472 1476										
				BS STD	03		0482 0475		34945 3495		767 768	00	0466	68	029		1476										
			0	BS	04	00	0475		34945		768	00	044	7	033		1476 1476										
				STD BS	05 05		0442		3494 34942		27 7 2 27 7 2	00	044		ردن		1476										
				STD	06	00	0422		3494	2	2774	00	0429	97	038		1477 1477										
			-	BS STD	06 07		0422		3494: 3494		2774 2775	00	042	10	042	3	1478	36									
			0	BS	07	00	0406	,	3494	ı i	2775	00	041	3.0	046		1478 1479										
				STD BS	08 08		0391		3494 3494		2777 2777	00	1041.				1479	96									
				STD	09	00	0388	3	3494 3494		2 77 7	0.0	041	79	050		1481 1481										
			0	BS STD	09 10		0388 0388		3494. 3496		2779	0.0	041	28	054	8	1482	28									
			0	BS	10	00	0386	ó	3495		2779	0.0	0041	3.0	058		1484										
			0	STD BS		00	0379		3496 3496		2780 2780	00	7041	10	0 - 0		1484	41									
				STD	12	00	037	4	3496		2780	00	0041	44	063		1489										
			0	BS STD		00	037		3496 3496		2780 2781	00	0041	97	067	2	148	72									
				185	13	00	037	2	3496	1	2781						148										
				BS BS		325	037 038		3497 3497		2781 2781						148	83									
				BS	13	50	037	1	3497		2781 2781	0.0	0041	0.1	071		148										
			C	STD		00	037 037		3497 3497	0	2781						148	88									
				STD	15	00	036	8	3497		2782	00	0042	64	075		149										
			C	BS	15	00	036	٥	3496	0	2782						- 77	J 7									

REFERENCE CTRY ID.	SHIP LAT	ITUDE	LONGITUDE	DRIFT	MARSDEN SOUARE	STATION TO		YEAR	CRUISE	GINAT	OR"S	-	DEPTH	MAX. DEPTH OF	OBS	WAVE ERVATIONS	WEA- THER	CLOUP			NODC	
CODE NO.	CODE	1/10	1/1	0 2 3	10" 1"	MO DAY H	R,1/10		NO.		MBER		BOTTOM	S'MPL'S	DIR.	HGT PER SE	CODE	TYPE AM	T		NUMBER	
318008	EV 44	11 N	04840	w	149 48	04 24 2	15 1	1967	IIP	9903	3		3109	15	19	5 2	X 2	03			0055	
					WA.		IND	BARC	<i>)</i>	TEMP.		VIS.	NO.	SPEC	CIAL							
					COLOR	TRANS. DIR.	OR FORCE	METE			W ET C	ODE	OBS. DEPTHS	VABEEO	ATIONS							
					DT	SD 18	518	11	2 04	4 (6	26									
	MESSENGR CAS	T CAR						_	SPECIFIC V	0111111	. E C	\ D	sou	NO.		PO 4-P	101AL→P	NO ₂ -N	NO3-N	SI O4-5		s
	HR 1/10	TYP	DEPTH	(m)	1 "C	s */	SIGM	A-T	ANOMAL	-X107	∑ ∆ DYN X	. M.	VELO	CITY	O ₂ ml/I	μg - α1/1	μg - o1/l	νg - α1/1	μg - α1/I	10 - QU		C
	17.0					1														1	1	
	'	ا د	то ' оо	00	0063	3323	266	67	0013	835	00	00	144	497		1	'		1	1		
	215	08			0063	33228	266							497								
		5° 08:	TD 00	10	0129 0129	3331 33308	266		0013	609	00	14		530 530								
				20	0139	3334	26		0013	423	00	27		536								
	004	08:		20	0139	33341	26							536								
		OB:			0149	33389	26							542								
				30	0260	3356	26		0012	639	00	40		594								
		08: S		50	0260 0358	33560 3405	26		0009	790	00	63		594 646								
		0B:		50	0358	34052	27		000)	,,,	00	0,		646								
		5	TD 00	75	0390	3442	27:		0007	372	00	84		669								
		08:	_	75	0390	34417	27							669								
		08:	5 00 TD 01	90	0578 0460	34725 3463	27:		0006	521	01	0.2		753 705								
		0B:			0460	34630	27		0000	721	0 1	02		705								
			TO 01		0567	3483	274	48	0006	277	01	18		756								
		08		25	0567	34830	27			207	- 1			756								
		08:		50 50	0610 0610	3490 34903	27		0006	297	01	33		778 778								
				00	0445	3473	27		0005	716	01	63		717								
		08	s 02	00	0445	34730	27	54					14	717								
				50	0388	3473	27		0005	162	01	90		701								
		08		50 00	0388	34730 3490	27		0004	003	0.2	16		701 752								
		08.		00	0484	34900	27		0004	,,,	02	10		752								
			TD 04	00	0487	3498	27		0004	586	02	64		770								
		08	_	00	0487	34975	27			2 2 5				770								
		08:		00	0455 0455	3498 34976	27		0004	215	0 3	08		774 774								
				00	0440	34970	27		0004	216	03	51		784								
		08	s 06	00	0440	34980	27	75					14	784								
				00	0430	3499	27		0004	128	03	93		797								
		08		00	0430	34990 3500	27		0000	037	0.4	22		797								
		0 B		00	0422	3500	27 27		0004	03/	04	33		810 810								
			TD 09	00	0408	3499	27	79	0004	033	04	74	14	821								
		ОВ		00	0408	34994	27		0.00	0.1	0.			821								
		S 08		00	0397	3499 34991	27		0004	017	05	14		833 833								
				00	0397	34991	27		0004	043	05	54		844								
		08		00	0385	34980	27	81					14	844								
		S	TO 12	00	0374	3498	27		0004	019	05	95		856								
		08		00	0374	34977	27		0004	0 / · F	0.4	2 5		856								
		0B		00	0368	3498 34975	27 27		0004	U40	00	35		871 871								
				00	0362	3498	27		0004	046	06	75		885								
		08	S 14	00	0362	34976	27	83					14	885								
				00	0360	3498	27		0004	088	07	116		901								
		ОВ	5 15	00	0360	34978	27	03					14	901								

																				_		
REFERE	ENCE	T			- 	MARSOEN	STATION TIM	E		ORIGIN			DEPTH	MAX.	OBS	WAVE ERVATIONS	WEA-	CLOUD		N 51	ATION	
CTRY	ID.	CODE	LATITU		DINGITUDE STORY	SQUARE 10° 1°	(GMT)	YE./	10	NO.	ADITATE IBBMUN	1	OT MOTTOR	O.E.	-	HGT PER SE	0005	TYPE AM		NI	JAMBER	
\rightarrow	NO.	-		1/10	- 1710	10 1			_	IIP 99			3292		_	5 2	x 2	0 3			0056	
3 1 8	800	B EV	4409	NIO	4826 W	149 48 WAT				AIR TE		1	NO.			1 - 1 - 1						
						COLOR	TRANS. DIR	SPEED /	BARO+ METER	DRY	WET		280	A05507	CIAL /ATIONS							
						CODE	(m) DIK.	FORCE	(mbs)	BULB	BULB	+	-									
						DT	50 22	S18	139	072	06	7 6	37	<u>L</u> ,						_		
		MESSENGE TIME	CAST	CARD		T *C	s °/	SIGMA-	, s	PECIFIC VOLU	IME	₹ △ D DYN. M X 10 ³	50	UND	O ₂ ml/l	PO4-P	TOTAL-P	NO ₂ -N	NO3~N	SI O4-SI	ρН	S.
		TIME HR 1/10	T NO.	TYPE	DEPTH (m)	, ,	3 "	310MA	`	ANOMALY-X	10'	x 10 ³	VEL	OCITY		yg - 01/1	ا/۱٥ - وبر	µg = a1/l	µg - a1/1	µg - at/1		
		HR 1710	-																			
		I	l .	l STD	0000	0567	3388	2673	,	001320) 5	0000	14	723								
		23	0	085	0000	0567	33882	2673						723								
				STD		0565	3388	2673		001320	9	0013		+723								
				OBS	0010	0565	33880	2673						+723 +725								
		0.0	3	OBS	0018	0565 0595	33880 3396	2673		00129	7.6	0026		738								
				STE OBS	0020	0595	33960	2676		001-7	, .			738								
				STO		0680	3416	2681		00125	53	0039		+777								
				OBS	0030	0680	34160	2681						+777								
				STO		0936	3470	2684		00122	81	0064		4885								
				085	0050	0936 0826	34695 34680	2684						4885								
				OBS OBS	0058	0905	34840	2700						4878								
				ST		0877	3485	270		00102	73	0092		4869								
				085	0075	0877	34850	270						4869								
				ST		0931	3501	2710		00099	75	011		4895								
				085	0100	0931 0730	35010 3472	271		00092	0.0	0141		4819								
				ST	0125	0730	34720	271		00072	00	0 - 4.		4819								
				OBS STI		0410	3422	271		00090	97	0164		4687								
				OBS	0150	0410	34223	271						4687								
				OBS	0160	0281	34350	274						4635								
				OBS	0190	0654	34885	274		00071		0201		4802 4782								
				STI		0602	3479 34790	274 274		00071	09	020		4782								
				OBS	0200 0210	0602 0453	34790	275						4721								
				08S	0218	0616	34975	275					1	4793								
				OBS	0225	0575	34920	275	4					4777								
				OBS	0230	0600	34960	275						4788								
				085		0567	34913	275 275		00057	60	023	_	4776 4781								
				ST OBS		0575 0575	3494 34935	275		00007	00	023		4781								
				OBS		0549	34990	276					1	4779								
				ST		0561	3502	276	4	00050	21	026		4785								
				OBS		0561	35020	276						4785								
				OBS		0548	35010	276						4783 4791								
				OBS		0560 0485	35030 3497	276 276		00046	36	031		4769								
				ST 08S		0485	34965	276						4769								
				ST		0451	3496	277		00043	87	035		4772								
				OBS	0500		34960	277		20243	0/	0/10		4772								
				ST				277 277		00041	.04	040		4777								
				OBS				277		00040	74	044		4784								
				ST 08S	_			277		202.0			1	4784								
				ST				277	7	00040	99	048		4798								
				OBS	0800			277				050		4798								
				ST				277		00040	158	052	_	.4810 .4810								
				OBS				277		00040	151	056		4810								
				ST OBS						00040		0-0	-	4829								
				S1				278		00039	996	060	3 1	4846	5							
				OBS			34993	278	31					14846								
				S1				278		0004	155	064		14856 14856								
				OBS				278		0004	179	068		1487 1487								
				S1						0004	019	000		1487								
				OB:	_			278		0004	088	072	25	1488	5							
				08:	-									1488								
				S	TD 1500	036	3497	271		0004	145	076		1490								
				08	S 1500	036	1 34972	271	83					1490	1							

ENCE	1				MARSDEN	STATION TH	us	ORIGIT	NATOR	*s	O.F.O.F.LA	MAX.		WAVE	Twee	CLOUD	1-			
ID, NO.	COOE	LATITU	DE LO	NGITUOE 1/10	SOUARE	STATION TIN		CRUISE	STATION	NC	DEPTH TO BOTTOM	OF S'MPL*	OBS	HGT PER SE	WEA- THER CODE	CODES		12	ATION JMBER	
8008	EV	4406	N O	4813 W	149 48	04 25 0	05 1967	4	05		3329	15	24	5 2	ΧO	0 3			0057	
					COLOR		SPEED MET	ER DRY	MP. Y	T CODE	NO. OBS. DEPTHS	SPE OBSERV	CIAL /ATIONS							
					DT	SD 25	S15 15		06		38									
	MESSENGA TIME HR 1/10	of NO.	CARD	DEPTH (m)	т "С	s */.	SIGMA-T	SPECIFIC VOL	UME 102	≨ △ 0 0YN. M. x 10 ³	VET (DCITY	O 2 ml/i	PO4-P ug = at/I	TOTAL-P pg = al/l	NO ₂ -N pg - al/l	NO3-N	\$1 O4-\$i yg - a1/1	рН	200
			ST0	0000	0898	3445	2671	001339	94	0000	14	859								П
	00	5	OBS STO	0000 0010	0898 0898	34452 3445	2671 2671	00134	1 /	0013		859 861								
			OBS	0010	0898	34452	2671	00134	. 4		14	861								
	00	2	STD OBS	0020 0020	0901 0901	3446 34458	2671 2671	00134	34	0027		864 864								
	00	,	STD	0030	0907	3456	2678	001279	90	0040	14	869								
			08s	0030 0045	0907 1130	34560 35060	2678 2679					869 958								
			STO	0050	1125	3506	2680	00127	31	0065	14	958								
			08s	0050 0063	1125 1113	35060 35050	2680 2681					958 955								
			STD	0075	1140	3513	2682	001254	+1	0097	14	968								
			OBS STD	0075 0100	1140 0953	35130 3482	2682 2691	00117	14	0127		968								
			OBS	0100	0953	34822	2691	0011	•	0-2.	14	901								
			OBS STD	0115 0125	1069 1022	35193 3520	2700 2709	001010	0.7	0155		950								
			OBS	0125	1022	35200	2709				14	935								
			OBS OBS	0139 0148	1009 1032	35220 35240	2713 2710					933								
			STD	0150	1013	3523	2713	00097	92	0180	14	936								
			085 STD	0150 0200	1013	35230 3497	2713 2726	00085	8.8	0425		936								
			OBS	0200	0809	34972	2726				14	865								
			08S	0209 0229	0825 0772	35058 35040	2730 2737					874 857								
			OBS	0232	0797	35080	2736				14	867								
			STO OBS	0250 0250	0767 0767	3504 35040	2737 2737	00075	61	0266		858								
			S T 0	0300	0649	3497	2749	00065	10	0301	14	819								
			085 085	0300 0330	0649 0562	34972 34885	2749 2753					819 788								
			OBS	0355	0570	34940	2756				14	796								
			08S STD	0385	0515 0538	34940 3500	2763 2765	00050	53	0359		779								
			085	0400	0538	34995	2765	00030		0-57	14	791								
			0BS 0BS	0421 0459	0537 0554	35010 35040	2766 2766					795								
			OBS	0490	0469	34950	2769				14	777								
			STO OBS	0500 0500	0483	3499 34988	2771 2771	00045	57	0407		785 785								
			STD	0600	0462	3499	2773	00044	03	0452	14	793								
			OBS STO	0600	0462 0437	34990 3498	2773 2775	00043	00	0495		793								
			OBS	0700	0437	34978	2775			_	14	799								
			STD OBS	0800	0432 0432	3500 35000	2777 2777	00041	80	0538		814								
			ST0	0900	0396	3497	2778	00041	04	0579	14	815								
			085 STD	0900	0396 0380	34965 3496	2778 2779	00040	78	0620		815								
			085	1000	0380	34955	2779				14	825								
			STD OBS	1100	0379 0379	3497 34968	2780 2780	00040	59	0661		842								
			STD	1200	0375	3497	2781	00041	19	0701	14	857								
			08S STD	1200	0375 0372	34965 3498	2781 2782	00040	94	0743		857								
			OBS	1300	0372	34975	2782				14	872								
			STC OBS	1400	0363 0363	3496 34963	2782 2782	00041	54	0784		885								
			STE	1500	0363	3497	2782	00041	85	0825	14	902								
			OBS	1500	0363	34970	2782				14	902								

																										1
REFE	RENCE					le E	MARS	DEN	STATION TIA	A E	VC + D			ATOR'S		DEPTH	MAX. DEPTH	OBS	WAVE	ions	WEA- THER	CLOUD			NODC	
CODE	ID.	CODE	LATITU	- 1	LONG	1/10	10"		MO DAY HE	.1/10	YEAR	CRUISE NO.	S	TATION		воттом	OF S'MPL'S	DIR.	HGT PE	R SEA	CODE	TYPE AM			NUMBER	
-	-	511	4.606	1/10	047		149			22	1967	IIP	99	06		3658	15	22	5 2	2	X1	0 3			0058	
31	1 8008	EV	4404	, M	041	79 W	147	WAT		IND	BAR	A		ир. °С	VIS.	NO.	SPEC	IAL								
								COLOR	TRANS. DIR.	SPEEC OR	METI	ER D	RY JLB	WET	CODE	OBS. DEPTHS	OBCCOVA	TONS								
								DT	SO 25	S16	-	-	89	078	3 6	36										
								0,	1			SPECIFIC			₹ Δ D	150	UND	- 10	PO	4-P	TOTAL-F	NO2-N	NO3-N	\$104-5	рН	S
		TIME	CAST NO.	CAR	E 3	OEPTH (m)	1	°C	5 */	SIG	7-AM	ANOMA	rFA-X1	07	ΣΥΝ. Μ. χ 10 ³	VEL	OCITY	0 2 m1/l		61/1	νg = a1/1		yg = al/l	ug + al.	1	c
		HR 1/1	0				-		+			<u> </u>							T							
		ì	1	۱ ς	TO	0000	1	097	3491	2	673	001	323	7	0000		+938									
		0.2	22	ОВ		0000		097	34909		673	001	224		0013		4938 4939									
					TD	0010		097	3491 34909		673 673	001	320) I	0013		4939									
				0B S	5 T0	0020		098	3491		673	001	329	4	0027		4941									
		00	0 4	ОВ	S	0020		098	34910		673						4941 4942									
				OB	S	0025		1098	34910 3491		673 673	001	331	8	0040		4943									
				0B		0030		1098	34910		673						4943									
				S	TD	0050		1105	3495		675	001	319	9 2	0066		4949 4949									
				08		0050 0075		1105	34950 3522		675 682	001	259	8 9	0099		4983									
				08	STD BS	0075		1180	35220		682					1	4983									
					STD	0100		1209	3532		683	001	249	95	0130		4998 4998									
				08		0100		1209	35315 3534		683	001	221	8.3	0161	_	5000									
				O E	STD as	0125 0125		1202	35335		686	00.		-		1	5000									
				OE		0138		1160			694		. 1 .		010		4988 5001									
					STD	0150		1190 1190			694	001	116	12	019		5001									
				0.6	BS STD	0150 0200		1015			2716	000	96	05	024	4 1	4946									
				OF		0200		1015	35275	_	2716						4946									
				0.6		0232		0851			2725 2726						4887									
					BS STD	0242		0900 0890			2726	000	087	12	029	0 1	4906									
					BS	0250		0890	35135		2726						4906									
					BS	0270		0794			2734 2734						4879									
					BS STD	0278		0808			2739	00	075	00	033		4869									
					BS	0300		0772	35070		2739						4869									
					85	0339		0721			2739 2750						4801									
					BS BS	0358 0370		0607			2751				_		4813									
					STD	0400		0559			2756	000	059	09	039		4799									
					BS	0400		0559			2756 2765	0.0	051	95	045		14812									
					STO BS	0500 0500		0548			2765	-				1	4812									
					BS	0510		0535	35000)	2765						4808									
					BS	0525		0563			2766 2769						14823 14787									
					BS STO	0560 0600		0465			2770	00	047	754	050	2	14807									
					BS	0600		0494	4 3499	5	2770		0	220	05.		14807									
					STD	0700		0453			2775 2775	0.0	043	529	054		14806 14806									
				0	BS STD	0700		0453			2776	0.0	042	254	059	91	14813									
				0	310 385	0800		042	9 3498		2776				0.1		14813									
					STD	0900		0421		=	2778	0.0	041	195	063		14829 14829									
				C	BS	0900 1000		042		כ	2778 2779	0.0	04	159	06		14837									
				0	STD BS	1000		040		0	2779						14837									
					STO	1100		039	4 3498		2780	0.0	004	139	07		14848									
				C	BS	1100		039			2780 2781		004	120	079		14840									
					STO OBS	1200 1200		038 03B			2781						14861									
				(5T0	1300)	037	6 3498	-	2782	0.0	004	123	07		14874									
				(OBS	1300)	037			2782 2782		004	158	08		14874									
					STO) 1400 1400		037			2782		,04		55		14889	9								
				,	OBS ST(036			2782	0.0	004	176	08	82	14904									
				(OBS	1500		036		0	2782						14904	+								

REFERENCE CTRY IO. CODE NO. 318008	SHIP CODE	LATITU 4418	1/10	LONGITUOE 11/10	\vdash	MARSO SOUA 10°	1*	мо 04	25		1967	7	RUISE NO.	STATION NUMBER		DEPTH TO SOTTON	3 MTL	00.	WAVE SERVATION HGT PER	SEA C	VEA- HER OOE	CLOUD COOES TYPE AM		N 2.	NODC IATION UMBER	
							COLOR	_	_		E (m)	TER bs1	ORY BULB	WET	COD	NO. OBS. DEPTHS	OBSERV	CIAL 'ATIONS								
	MESSENGR CAST TIME OF NO.			ОЕРТН	(m)	Т	DT ℃	SI) 12	1	MA-I		061 PECIFIC VOLU		3 E A O YN. W		UNO OCITY	O2 m1/l	PO4-6			NO2-N pg - a1/I	NO ₃ -N yg - a1/I	SI O4-Si yg - ai/i	рН	2000
	160		STI OBS ST	000	0	0;	236 236 234	32	286 2858 290	3 26	525 525 529		001775		0000	14	569 569 570									
	00	1	OBS STI OBS	001 0 002 002	0	0:	234 228 228 207	3: 3:	2899 320 3200 3360	26	529 553 553		001511		034	14 + 14 14	570 574 574 567									
			OBS ST OBS OBS	D 003	0	0;	216 216 216 227	3:	339 3385 3409	26	669 669 670		001362	!4 (0048	14	572 572 580									

REFERENCE	SHIP			E #	MARS	OEN	STATION T				ORIGIN	ATOR'	S	OEPTH	MAX		WAVE	WEA				NOOC	
CODE NO.	COOL	LATITU	1/10 L	NGITUDE S	50U/		(GMT)		YEAR	CRUISE NO.		STATIC		BOTTOM	0.5	000	HGT PER S	000				TATION	
31800	18 FV	4416		4911 W	149				1967	1	-			0265	03		6 2	X4		1		2060	
1 31/000	79 - 1	4410	, 14 0	4211 MI [147	WAT		VINO			AIR TE			NO.			10121	1 44	1 013	1	I	0060	
							TRANS. OIR.	SPEED	MET	ER I	ORY	WE		240		CIAL VATIONS							
					-	CODE	1111	FORCE	(mb:		ULB	BUL		-									
						DT	SD 16	\$35	01	4 0	78	07	8 1	20	L,						1		
	MESSENG TIME HR 1/10	I ND.	CARO TYPE	OEPTH (m)	т	℃	s */.	SIGM	A -T	SPECIFIC	ALY-X1		₹ △ 0 0YN, M X 10 ³		DCITY	O ₂ mi/I	PO4-P yg - 01/1	TOTAL - F μg - ot/l		NO3-N µg - al/l	51 O4-Si µg = a1/I	pН	SCC
															Ì								
	'		STO	0000		010	3305	265	55	001	494	5	0000	14	470								
	17	1	OBS	0000		010	33048	265							470								
			STD	0010		009	3306	269		001	484	6	0015		472								
			OBS	0010		009	33060	265		001	. 7.5				472								
	0.0	2	STD	0020		009	3307	265		001	475	1	0030		474								
	00	2	OBS	0020 0025		009	33072 33100	265							474								
			OBS STD	0025		010	3314	265		003	423	1./.	0044		477								
			OBS	0030		010	33140			001	.423	•	0044		477								
			OBS	0040		079	33200	261							438								
			STD	0050		079	3325	267		001	300	2	0071		440								
			OBS	0050	-0	079	33252	26						14	440								
			STD	0075	-0	062	3334	268	32	001	236	6	0103	14	454								
			OBS	0075		062	33342	268							454								
			STD	0100		047	3339	268		001	203	5	0134	14	465								
			OBS	0100		047	33392	268							465								
			085	0110		042	33401	268							470								
			OBS	0115		005	33450	268							488								
			STD	0125		027	3346	269		001	161	8	0163		480								
			085	0125		027	33457	269							480								
			OBS STD	0140 0150		024	33493 3366	269		0.01	038	7	0191		484 515								
			085	0150		035	33659	270		001	0 28	1	0191		515								
			085	0175		203	33980	271							599								
			OBS	0197		598	34579	272							777								
			STD	0200		595	3460	272		000	847	4	0438		776								
			085	0200		595	34595	272							776								
			OBS	0225	0	520	34580	273						14	750								
			STD	0250	0	486	3459	273	39	000	728	8	0277	14	740								
			085	0250	0	486	34588	273							740								
			085	0265	0	483	34582	273	39					14	741								

	REFERENC	E _						- =	MARSOEN	STATION TH	W.E						OEPTH		085	WAVE		CLOUD			NODC	
	CTRY IO			LATITU	- 1		'1/10	INDO			2 1/10	YEAR	CRU	3 32I					1		20.00			ì	UMBER	
WATE WATE WATE Lap.			v	4413		048						1967	+	_			1780	15				0 3			0061	
CAMP	1 21/00/	o al	V	4417	JN	0 4 0	70 7	1			IND	BAR	-			_	NO.	<u> </u>								
									COLOR	TRANS. DIR.	OR	O MET	ER			CODE		OBSERV	ATIONS							
											_		\rightarrow		_	2	31									
STO 0000 -0011 3303 2654 001498 0001 14461									1 0 1	36 20		- 00					4	11110		100.0	70741 8	NON	NON	5104-5		5
185			IME O		CAR TYP	RO PE	OEPTH	m)	1 °C	s */	210	T-AME	SPEC	OMALY-XI	in?	YN. M x 10 ³	. AET	OCITY	O 2 m1/1		yg - 01/t	ug - 01/1				C
185		HR	1/10			-			-		+-						_									77
185		- 1	1		l S	TD	000	0	-0011	3303	2	654	00	01498	9 0	000	14	461		1	,	,				•
STO 0010 -0011 39030 2656 0014846 0030 14458 0030 00458 0020 -0025 3304 2656 014846 0030 14458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 0030 00458 00459			185		0 B	S																				
STD 0020													01	01498	15 L	0.15										
003													0	01484	6 0	0 3 0										
085			003																							
OBS 0050 -0052 3310 2662 0014266 0073 14451 14461 STD 0079 -0069 3322 2672 STD 0079 -0069 3322 2672 STD 0100 -0044 3338 2684 OBS 0100 -0044 33375 2684 STD 0125 0020 3363 2701 OBS 0125 0020 3363 2701 OBS 0142 0176 33830 2708 OBS 0142 0176 33830 2708 OBS 0140 0183 3396 2722 STD 0150 0330 3418 2723 OBS 0150 0750 34676 2723 OBS 0160 0765 34676 2723 OBS 0160 0765 34676 2725 OBS 0160 0765 34676 2727 OBS 0200 0370 3428 2727 OBS 0200 0370 3428 2727 OBS 0200 0370 3428 2727 OBS 0230 0496 34642 2727 OBS 0230 0496 34642 2725 OBS 0150 0450 3470 2755 OBS 0150 0400 0486 3469 2755 STD 0400 0486 3467 2761 OBS 0100 0441 3489 2766 OBS 0700 0441 3489 2766 OBS 0700 0441 3489 2766 OBS 0700 0451 3493 2771 OBS 080 0377 3488 2775 OBS 080 0377 3489 2775 OBS 080 0377 3488 2775 OBS 080 0377 3488 2775 OBS 080 0377 3488 2775 OBS 080 0377 3489 2775													0	01453	11 (0045										
OBS													0	01426	66 (073										
S							005	0	-0052	33100	2	662														
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CTRY ID.	CDDE	*	1/10	NOCITUDE 1/10	10" 1"	MD DAY HE	.1/10	NO.	NUM	BER .	воттом	S'M PL'S		HGT PER SEA	CODE	TYPE AMT		NU	MBER	
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	MESSENGR TIME	CAST	CARD	DEPTH (m)	I *c	s ./	SIGMATI	SPECIFIC V	OLUME		SDU	JND	D10	PO ₄ -P	TOTAL-P	NO2-N	ND3-N	SI O4~Si		s
	HR 1/10	NO.	TYPE	DEPTH (M)	' '	3 7	3IGMA=1	ANOMAL	Y-X107	₹ △ D DYN. M. x 10 ³	VELC	CITY	02 ml/l	μg + α1/1	νg - οt/1	μg - al/l	μg = at/l	pg = al/l	рН	C
			(0000	0017	2304	2664	0015	05/		1	. 7.2					!			
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			STO	0020	-0009	3332	2678	0012	776	0028		469								
	00	3	08S	0020 0025	-0009 -0023	33320 33385	2678 2684					469 464								
			STO	0030	-0020	3354	2696	0011	059	0040		468								
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			OBS	0050	0115	33710	2702	0010	471	0061		535 535								
			08S	0060 0065	0170 0107	33795 33900	2705 2718					563								
			STO		0182	3397	2718	0008	997	0086		537 573								
			085	0075	0182	33965	2718	0008	140	0107		573								
			STD OBS	0100	0520 0520	3450 34500	2728 2728	8000	160	0107		728 7 28								
			085	0110	0635	34690	2728				14	779								
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			OBS	0125	0540	34638	2736				14	742								
			STO OBS	0150 0150	0670 0670	3486 34860	2737 2737	0007	391	0145		801 801								
			STO	0200	0518	3470	2744	0006	762	0180		746								
			08s	0200 0210	0518 0534	34700 34740	2744 2745					746 755								
			OBS	0240	0470	34710	2750					733								
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			OBS	0290	0550	34900	2756					777								
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			STD OBS	0500 0500	0452 0452	3491 34908	2768 2768	0004	786	0344		771 771								
			STD	0600	0436	3492	2770	0004	630	0391	14	782								
			085 STD	0600 0700	0436 0420	34918 3492	2770 2772	0004	559	0437		782 791								
			OBS	0700	0420	34916	2772				14	791								
			ST0 08S	0800 0800	0415 0415	3492 34923	2773 2773	0004	546	0483		806 806								
			STD	0900	0399	3492	2774	0004	510	0528		816								
			08S	0900 1000	0399	34915 3492	2774 2775	0004	627	0572		816								
			085	1000	0396	34919	2775	0004	757	0573		831 831								
			STD		0385	3492	2776	0004	515	0619	14	843								
			OBS STD	1100 1200	0385 0380	34916 3492	2776 2776	0004	549	0664		843 858								
			085	1200	0380	34915	2776				14	858								
			ST0 085	1300 1300	0371 0371	3491 34909	2777 2777	0004	567	0709		871 871								
			STO	1400	0367	3491	2777	0004	600	0755		886								
			OBS STD	1400 1500	0367 0361	34909 3491	2777 2778	0004	606	0801		886 900								
			OBS	1500	0361	34909	2778	0004	000	0001		900								

REFE	RENCE					L =	MARSDE	4	STATION TIA			C	RIGINA	TOR'S		DEPTH	MAX.		WAVE	WEA-	CLOUD			NDDC	
CTRY	ID.	CDDE	LATITU	DE	LDHGITUDE	DAIFT	SDUARE	- 1	IGMTI		YEAR	CRUISE		ATIDN		TO BOTTOM	DF	1	ERVATIONS	THER	CODES		N	UMBER	
CODE	HD.		<u> </u>	1/10	1/10	2 =	10° 1	. 1	MD DAY HR	.1/10		HO.	N.	UMBER		-	S'MPL"S	DIR.	HGT PER SE	A	TYPE AM	7	_	_	
31	8008	EV	4408	N	04831 W		149 4	8	04 25 2	17 1	967	IIP	991	11		3383	04	18	9 2	X6	03			0063	
	,							WAT	ER W	IND	BARC	A	IR TEM	P. °C	VIS.	ND.	Spr	CIAL							
								LOR	TRANS DIR.	SPEED	METE	R D	RY	WET	CODE	DBS. DEPTHS	DBSERV								
							CC	3DE	(m)	FORCE	(mbs	1 81	JEB .	BULE	_										
							0) T	SD 18	540	01	4 1	06	106	0	27									
		MESSEN	GR CAST	CARE			l					SPECIFIC	VDLUA	AE S	A D	SOL	JND		PO4-P	TOTAL-P	NO ₂ -N	ND3-N	SI D4-Si		5
		IIACE	약 NO.	TYPE	DEPTH	(m)	1 %		s */	SIGM	A-T	ANOM	ALY-XIO	, D	(10 ³	. VELC	YTIDG	02 ml/l	µ0 = 01/1	μg = σ1/1	ug - a1/1	μg = σ1/I	μg = α1/1	pH	c
		HR 1/	10											-		+-			-		_		-		\forall
					- 0		050		3373	266	ا م	001	363		000	1 1 6	695		1			I	i	1	L
		_		51								001	203	, ,	000										
		2	17	089			050 050		33732 3375	266		001	356	2 0	014		695 698								
				S1			050		33746	267		001	370	2 0	014		698								
				0BS			051		3375	267		001	356	7 0	027		702								
		0	01	0Bs			051		33754	267		001	220	. 0			702								
		0	V 1	OBS			051		33755	267							703								
				51			051		3376	267		001	355	5 0	041		704								
				089	-		05		33760	26							704								
				51			082	_	3450	268		001	201	2 0	066	14	839								
				089			082		34495	268						14	839								
				089		52	098	39	34930	269	94					14	909								
				51		75	09	28	3486	269	9	001	095	6 0	095	14	888								
				OBS	5 00	75	092	28	34864	269	9					14	888								
				OBS	5 008	39	09	10	34880	270	3					14	884								
				083	5 00	90	09		34920	27(-						891								
				51			085		3481	27(001	029	2 0	122		B63								
				0 B S			089	_	34805	270					1		863								
				51			050		3431	27		000	938	4 0	146		722								
				089			050		34310	27							722								
				OB:	-		04		34323	27:							729								
				0B:			050		34405 3440	27		000	860	5 0	169		722								
				OB:	TD 01: S 01:		04		34400	27.		000	,500	_ (407		722								
				0B:	-		03		34420	27:							687								
					TD 02		06		3477	27		000	756	5 0	209		791								
				0B:			06		34768	27	-	000		_			791								
				0B:			06:		34786	27							795								
				0B:			04		34680	27						14	740								
				0B		40	06	04	34850	27	45					14	790								
				S	TD 02	50	05	69	3485	27	49	000	631	9 0	244		777								
				0 B	5 02	50	05		34850	27							+777								
					TD 03		05		3489	27	-	000	1583	8 0	274		+779								
				OB:			05		34892	27							+779								
				OB.		05	05		34930	27	_						+775								
				0 B			05		35000	27							802								
				OB.			04		34855	27							+758								
					TD 04		04		3491	27		000)495	4 (328	-	+764								
				ОВ			04		34905	27							764								
				ОВ	5 04	05	04	80	34920	27	66					1.	4768								

	DEPTH ORSERVATIONS																									
REFERENCE CTRY ID. CODE ND.	SHIP	LATITU	DE LOI	NGITUDE TOUTH	SQUAR		(GMT)	R.1/10	YEAR	CRUISE NO.	51	TATION TATION U MBE	1	DEPTH TO BOTTDA	DEPTH	08	SERVA		CODE	CC	DUD		5	ADDC IATION UMBER	
318008	BEV	4419	N 04	927 W	149	9	04	27	166	1967	IIF	99	12		0068	00	01	4	2	X1	6	2			0064	
			'			WAT	ER	V	VIND	BAR	D-	AIR TEA	AP.°C	V15,	ND.	SP	EC1AL									
					CC	LOR	TRANS. Imi	DIR	SPEEC OR FDRC	MET	ER	DRY IUL8	ROTE	CODE	DEPTH:	0.0550	VATIONS									
								36	518	3 24	4 (25	00	B 7	05			<u>L</u>			_					
	MESSENGR CAST TIME of NO.			DEPTH (m)	1 7	;	5	٠/	SIG	MA-T		C VOLUE	M E	∑ ∆ D N, M X 10 ³	SC VEI	DNU YIIOO.	D 2 m1/		O4-P 3 - at/1	101AL-1 pg - o1/1			ND3-N µg - al/l	\$1 04-\$1 99 - a1/1	рН	S
	17 TO	1																								
	1	1	STD	0000	02	41	32	76	26	517	001	1855	1	0000		+570										
	160	6	OBS	0000	02	41	32	758	26	517						+570										
			STD	0010	02	36	32	76	26	517	00	1851	7	0019		+569										
	16	6	OBS	0010	02			758		517			_			+569										
			STD	0020	02			76		518	00	1848	2	0037		4569										
	16	6	OBS	0020	02			759		618	0.0	1027	2	0055		4569 4568										
			STD	0030	02			77		619	00.	1837	2	0055		4568										
	16		OBS	0030	02			767		619						4556										
	16	6	OBS	0039	01	84	33	138	21	652					Α,	+ J J U										

REFERENCE SHIP MARSDEN STATION TIME ORIGINATOR'S DEPTH MAX. WAVE WEA- CLOUD																											
REFER	ENCE	SHIP				- ×	MARS	SDEN	STAT	ION TI				ORIGIN	ATOR'	s			M AX.	. 1		WEA-			1	000	
CTRY	10.	CODE	LATITU		LONG	SITUDE TOUR	sou	ARE		GMTI		YEAR	CRU		STATIC		٦.	TO OTTOM	OF	003	ERVATIONS		COOES		51	ATION	
CODE	NO.			1/10		1/10 ==	10"	l.	MO I	DAY H	R.1/10		NO	0, 1	NUMB	R	- 0	0110	S'MPL"	S DIR.	HGT PER S	CODE	TYPE AM	7	N	JABER	
318	3008	EV	4417	N	049	14 W	149	49	04	27 1	180 1	967	11	P 99	13		0	082	01	01	5 2	X1	3 2			0065	
								WA	TER	V	VIND	BARC		AIR TE	MP. °C		Ť	NO.				,	•	'	'	,	
								COLOR	TRANS.	OIR	SPEED	METE		URY	WE	r cc		OBS. DEPTHS	OBSERV	CIAL							
								CODE	-{m}	Dirid	FORCE	(mbs)	BULB	BUL	В	10	DEPTHS									
										36	\$20	24	4	025	00	8 7	7	06									
		MESSENGR	CAST	CAR	n			_					5350	IFIC VOLU		₹ △	0	501	GNL		PO ₄ -P						,
		IIMs 6	NO.	TYPE		DEPTH (m)	1	70	5	٠/	SIGMA	A - T		DMALY-X1		DYN. x 10			CITY	O ₂ mI/I	pg - 01/1	IOTA L-P		NO3-N	\$1 O4~\$i µg + ot/l	pН	Ċ
		NR 1/10					-		+-		-					X 10	,	-	-		-			70 200	7.0		-
							١.		1		1	.															
				S1		0000		271	33		264		00	1560	3	000	0	14	589								
		180)	OBS		0000	0	271	33	178	264	8						14	589								
				ST		0010	0	264	33	18	264	9	00	1553	7	001	.6	14	587								
		180)	OBS	S	0010	0	264	33	180	264	9						14	587								
				SI	D	0020	0	253	33	20	265	1	00	1530	3	003	1	14	585								
		180)	OBS	3	0025	0	242	33	212	265	3						14	581								
				ST	۵۱	0030	0	228	33	23	265	5	00	1491	0	004	6	14	576								
		180)	089	5	0030	0	228	33	227	265	5						14	576								
				ST	0.1	0050	0	179	33	3 2	266	7	0.0	1384	0	007	15	14	559								
		180)	OBS	5	0050	0	179	33	322	266	7						14	559								
				ST	D	0075	0	233	33	51	267	7	0.0	1286	1	010	18		589								
		180)	OBS	5	0075	0	233	33	505	267								589								

REFERENCE	SHIP			- 4	MARSE		STATION T	ME			RIGIN	ATOR'S	T	DEPTH	MAX. DEPTH		WAVE	WEA				NODC	
CTRY ID.	CODE	LATITUDE		NGITUOE	SOUA		(GMT)		YEAR	CRUISE NO.		TATION		OT MOTTOB	OF	00.	ERVATIONS	THER				TATION	
	5.7		/10	1/10	10°		MO DAY H			_		UMBER	\rightarrow		S'MPL"	1	HGT PER SI	:A	TIPE AN		-		
318008	EV	4414	N O	4901 W	149		04 27		1967				\perp	1282	12	01	5 2	X1	3 2		- 1	0066	
					-	WAT		SPEED	BARG) ·	IR TEA		vis.	NO.		CIAL							
						CODE	TRANS. OIR.	FORCE	M ET (mbs		DRY ULB	W ET BULB	CODE	OEPTHS	OBSERV	2 MOIT A							
					İ		36		24	0 0	06	-006	7	14									
	MESSENGI	T T											A D				T				T		
	TIME	of NO.	CARD	DEPTH (m)	T	°C	5 %.	SIGA	T-AN	SPECIFIC	VOLUI	ME DY	△ D N. M. (10 ³	. VETO	TIDO	0 2 ml/1	PO4-P µg = at/l	TOTAL-1			\$1 O4-\$		o c
	HR 1/10			-				+					(10-	-			+		-	39 - 5.71			+
	1] [6.70	0000		0.0	2220	1	<i>-</i> /	001		1 0		1							!	1	
	19	0	STD OBS	0000		189 189	3320 33199	26 26		001	483	2 0	000		553 553								
	17	0	STD	0010		189	3320	26		001	486	/ ₄ 0	015		555								
			STD	0020		78	3319	26			482		030		551								
	19	8	OBS	0022		174	33190	26					000		550								
			STO	0030	01	160	3318	26		001	478	4 0	044		545								
	19	8	OBS	0045		99	33164	26						14	520								
			STO	0050		36	3317	26		001	416	7 0	073		492								
	19	8	OBS	0067	-00		33169	26		1					446								
	19	0	STD OBS	0075 0091	-00)66	3325	26		001	321	8 0	108		469								
	19	8	STD	0100		169	33425 3351	26 26		001	235	7 0	140		516 565								
			STO	0125		11	3379	26			233		171		677								
	19	8	OBS	0135	-		33914					- •		_									
			STO	0150	05	87	3419	26	95	001	132	9 0	200	14	759								
	19	8	OBS	0182	07	115	34631	27	13					14	821								
			STO	0200		58	3464	27		000	894	5 0	251	14	802								
			STD	0250		25	3464	27		000	735	3 0	292		757								
	19	8	085	T0275		+72	34648	27				2 .			739								
	1.0	0	STO	0300		30	3465	27		000	626	2 0	3 26		726								
	19	0	OBS STO	0367 0400		355 378	34651 3471	27		000	534	3 0	384		705 721								
			STO	0500		+25	3485	27		000			435		759								
	19	8	OBS	T0556		37	34903	27		000	.,,		. , ,		774								
		-	STD	0600		+26	3490	27		000	464	8 0	483		777								
			STD	0700	04	+04	3490	27	72	000	449	1 0	528	14	784								
	19	8	OBS	T0752		96	34896	27							790								
			STD	0800		190	3490	27			442.	-	573		795								
	19	o	STO	0900 T0972		883	3490 34902	27		000	443	1 0	617		809								
	19	0	OBS STD	1000		80	34902	27		000	447	0 0	662		820 824								
			OBS	T1049		80	34903	27		000		0.	02		833								
	- /	-	STO	1100		79	3490	27		000	453	1 0	707		841								
			STD	1200		177	3491	27			457		752		857								
	21	2	OBS	T1232	0.3	376	34908	27	76					14	862								

REFERENCE	CE			- #	MARSDEN	STATION TIM		DRIGINATO	R*\$	DEPTH DEP		WAVE SERVATIONS	WEA-	CLDUD			ATION	
CTRY II	D. CODE	LATITUO		NGITUDE SOUTION	SQUARE	(GMTI	YEAR	CRUISE STAT		BOTTOM S'ME	F	HGT PER SE	THER	TYPE AM			UMBER	
CODE N	0.		1/10	1/10		AO DAY HR.			1961	3 701 1			X1	6 2	-		0067	
3180	108 EV	4411	N 04	847 W			00 1967				3 35	2 2	\1	0 2	ŀ	1	0007	
					WAT		SPEED MET		VIS.	ND. S	PECIAL							
					COLDR	TRANS. DIR.	OR (mb		ILB CODE	DEPTHS DESE	RVATIONS							
						36	520 24	0 006 0	00 7	13								
							320 24		₹ΔD		T	1.0			1.0	51 D4-S1		S
	MESSENGR		CARD	DEPTH (m)	1 °C	5 %	SIGMA-T	SPECIFIC VOLUME	DYN. M	. VELOCITY	D ₂ ml/	PO 4-P yg - 01/I	10TAL-P pg - 01/1	NO2-N pg - a1/l	ND3-N µg - ot/l	yg + oi/l	pН	C
	HR 1/10								x 10 ³	+	-	-		-				+
										1,,,,,					l	I	l	1.1
			STD	0000	-0006	3299	2651	0015293	0000									
	000	0	OBS	0000	-0006	32993	2651	0015133	0015	14462								
			STD	0010	-0011 -0018	3301 3303	2653 2655	0015123	0015									
	000	^	STD OBS	0020 0028	-0015	33047	2656	0014737	0030	14459								
	000	U	STD	0020	-0027	3307	2658	0014604	0045									
			SID	0050	-0050	3328	2676	0012900	0073	14454	.							
	000	0	OBS	0054	-0054	33318	2680			14454								
			STD	0075	0102	3350	2686	0011987	0104									
	0.0	0	OBS	0082	0121	33544	2688		-1	14541								
			STD	0100	0042	3358	2696	0011031	0132	14509 14508								
	0.00	0	OBS	0109	0035	33626 3390	2700 2712	0009617	0158									
			STD	0125 0150	0197 0398	3426	2722	0008698	0181									
	0.0	0	OBS	T0165	0488	34437	2726	00000,0	0-07	14725								
		0	STD	0200	0591	3471	2736	0007567	0222	14776								
	0.0	0	OBS	0219	0623	34810	2739			14793								
			STD	0250	0568	3480	2746	0006657	0257									
			STD	0300	0497	3479	2754	0005942	0289									
	0.0	0	OBS	T0335	0460	34785	2757	0005100	0345	14740 1475								
			STD	0400	0460 0459	3485 3492	2762 2768	0005199	0394									
			STD	0500 0539	0459	34938	2769	0004781	0,2,3	1478								
	0.0	U	OBS STD	0600	0456	3496	2772	0004554	044									
	00	0	OBS	T0661	0449	34967	2773			1479								
	30	•	STD	0700	0436	3496	2774	0004421	0486	6 1479	9							
			STD	0800	0408	3494	2775	0004337	053	0 1480	3							
	0.0	0	OBS	T0880	0391	34924	2776			1480								
			STD	0900	0388	3492	2776	0004320	057									
			STD	1000	0376	3492	2777	0004304	061									
			STD	1100	0368	3491	2777	0004339	065	9 1483								
	0.0	0	OBS	T1125 1200	0367 0366	34911 3491	2777 2 7 77	0004394	070									
			STD	1300	0365	3492	2778	0004544	074									
	0.0	00	STD OBS	T1321	0365	34917	2778	0004449		1487								
	0.0	70	UDS	11341	0,00	2471	2110											

REFERENCE SHIP	100	E	MARSOEN	MIT MOITATE		ORIGINATO	DR'S	пертн	MAX. DEPTH		WAVE	WEA-	CLOUD			NODC	
CTRY ID. CODE LATIT	1/10	NGITUDE SO		(GMT)	YEAR	NO. NUA		BOTTOM	OF		RVATIONS	CODE	CODES		51	UMBER	
310000 511 1100				MO DAY HR,1					S*MPL*S		HGT PER S	EA	TYPE AM			OMOCK	
318008 EV 4409	9 N 04	834 W :		04 28 02				3109	11	35	3 2	X1	6 2			0068	1
			WAT		8AR		VIS.	NO.	SPEC								
			CODE	ten) DIR.	DR (mb		VET COD	DEPTHS	OBSERVA	2 NOIT							
					26 25	4 017 0	11 7	12									
MESSENGR CAST				01	120 23												\neg
IIME OF NO.	TYPE	DEPTH (m)	I C	s %.	SIG M A -T	SPECIFIC VOLUME ANDMALY-X107	₹ ∆ D	VELOC		O2 ml/l	PO4=P	TOTAL-P	NO2-N	NO3-N	SI O4-Si	рН	500
HR 1/10							x 10 ³				µg = q1/1	ا/10 - 94	N8 - al/	μg - qt/l	yg = at/l		c
	1	[]															
2.22	STD	0000	0776	3417	2668	0013702	0000										
023	08S ST0	0000	0776 0775	34172 3417	2668	0012721		148									
	STD	0010	0774	3417	2668 2668	0013721	0014	_									
023	OBS	0023	0774	34167	2668	0013727	0027	7 148 148									
	STD	0030	0767	3417	2669	0013661	0041	_									
023	OBS	0045	0751	34166	2671	001-001	00 11	148									
	STD	0050	0820	3435	2675	0013089	0068										
023	OBS	0068	1000	34864	2687			149									
	STD	0075	0967	3483	2689	0011826	0099	149	02								
	STD	0100	0866	3475	2700	0010895	0127	148	67								
0.0-	STD	0125	0791	3471	2708	0010133	0154	_									
023	OBS	T0133	0772	34701	2710			148									
023	STD	0150 0174	0750 0719	3472 34735	2715	0009520	0178										
023	STO	0200	0682	3475	2720 2727	0008446	0223	148									
	STD	0250	0621	3479	2738	0007421	0263	_									
023	OBS	T0256	0615	34799	2740	0001421	0-02	147									
	STD	0300	0579	3485	2748	0006511	0298										
023	085	0336	0553	34884	2754			147									
	STD	0400	0514	3489	2759	0005540	0358	147	80								
	STO	0500	0468	3490	2765	0005033	0411	147	78								
023	OBS	10504	0466	34904	2766			147									
0.20	STD	0600	0442		2769	0004760	0460		-								
023	OBS	10680	0427		2771			147									
	STD	0700 0800	0425 0415	3491 3492	2771 2 7 73	0004640	0507										
023	OBS	T0896	0415		2774	0004576	0553										
023	STO	0900	0404		2774	0004533	0598	148									
	STO	1000	0390		2775	0004457	0543										
023	OBS	T1073	0380		2775		0-13	148									
								_									

REFER		SMIP	LATITU	Df	LONGIT	DOE 300	MAR SOL	SOEN	STATION TO	ME	YEAR	CRUISE	ORIGINA	ATOR'S		DEPTH TO	DEPT		WAVE ERVATIONS	WEA- THER	CLOUD		STA	TION	
CTRY	1D. NO.	CODE		1/10		'T/10 B	10	1-	MO DAY H			NO.	N	UMBER	_	BOTTON	S'MPL		HGT PER SE		0 3			MBER	
31	8016	EV	4020	N.	0502	0 W	150	00 WAI		165	1967	-	99.			4663	<u> </u>		4 2	X6	0 3	1	1 0	001	
								COLOR	TRANS. DIR.	SPEED		ER	DRY	WET	CODE	OBS. DEPTHS	Caseo	VATIONS							
								OT	50 14	Sla		-	167	167	_	45	-								
		MESSENGR	CAST	CAR	ъ Т.	DERTIL 1-1		7 °C	5 1/4.		MA-T	SPECIFI	C VOLU	ME 3	E A D	so	UND	02 m1/1	PO ₄ -P	TOTAL-P		NO3-N	5104-51	ρН	S
		MESSENGR TIME HR 1/10	NO.	TYP	E	DEPTH (m1			3 7	310		ANON	AALY-X1	07	x 10 ³	, AET	OCITY		µg + α1/1	yg - 01/1	\fo = gu	yg = 01/l	μg = σ1/1		C
				_ ا	TO	0000	١.	1574	3556	21	626	001	1772	a (0000	15	5104	1		ĺ	I				
		06	5	OB:	S	0000	:	1574	35561	2	626	00.		_ `	,	15	104								
				OB.	S TD	0008		1573 1532	35610 3555		630 634	00	1692	4 (0017		5106 5092								
		00	3	0В.	S	0010		1532	35552	2	634						5092								
				OB	5 T0	0011		1502 1499	35631 3562		647 647	00	1576	1 (0034		5084 5084								
				οв	5	0020		1499	35620	2	647				0040		5084								
				S OB	TO	0030		1462 1462	3567 35669		659 659	00	1466) (0049		5075 5075								
				OB	\$	0043		1467	35800	2	668	0.0	1240	2	0077	1:	5080								
				S QB	TD	0050		1447 1447	3580 35795		672 672	00	1349	2 (0077		5075 5075								
				5	TD	0075		1404	3571	2	674	00	1333	1	0111	1	5064 5064								
				0B 5	15 10	0075		1404	35707 3567		674 675	00	1335	6	0144		5064 5063								
				08	3\$	0100		1389	35672	2	675					1	5063 5057								
				S 0 B	STD as	0125		1361	3563 35630		677 677	00	1317	1 5	0177		5057								
					STD	0150		1342	3560	2	679	00	1308	16	0210		5055								
				08 08		0150		1342	35600 35556		679 681						5055 5048								
				08	_	0169)	1349	35689	2	684						5061								
				0 E	STD	0200		1324 1324	3562 35624		685	00	1269	94	0274		5057 5057								
				OB		0203		1322	35614	- 2	684					1	5057	•							
				O E		0213		1286 1302	35556 35611		687						5046								
				08	55 510	0250		1258	3552	2	690	00	1230	06	033	7 1	5042	2							
				O E		0250		1258 1247	35520 35500		690						5042								
				06		0290)	1200	35460	2	696					1	5028	9							
					STD	0300		1224	3557 3557		2700	00	114	16	039		5039								
				06		0326		1170	35410) 2	2698						5023								
				06		0342		1069			2710 2712						4989								
					85	0380)	0969	3521) 2	2719						4958								
					BS STO	0390		0970	3523 ⁻ 3521		2721 2720	0.0	096	2 2	050		.4961 .4951								
					BS	0400)	0961	3520	9 2	2720						495								
					BS STO	0430		0885			2728 2 7 37	0.0	080	90	059		.493 .490								
				01	BS	0500	0	0787	3506	3 2	2737					1	490	7							
					BS BS	056		0622			2754 2752						486								
					ST0	060	0	0612	3497		2753	00	0064	65	066		485								
					BS BS	060		0612			2753 2756					1	485	2							
				0	BS	067	1	0538	3495	D :	2761					1	L483 L484	6							
					BS STD	069 070		0555			2762 2763	0.0	0056	24	072	3 1	1484	1							
				٥	BS	070	0	0538	3496	9	2763	0.1	0051	0.3	077		1484 1484								
					STD BS	080		0498			2769 2769					1	1484	1							
					STO	090	0	0479	3501		2772	01	0048	34	082		1485 1485								
					BS STD	090 100		0479			2772 2775	0	0046	59	087	74	1486	0							
				0	BS	100	0	0462	3501	4	2775		0045	7.1	092		1486 1487								
					STD	110		045			2777 2777		0045	7.1	092		1487	2							
					STD	120	0	0429	3501		2778	0	0044	77	096		1488 1488								
					BS STD	120 130		0429			2778 27 7 9		0045	808	101	10	1489	1							
				0	BS	130	0	041	3499	5	2779		0045		109		1489 1490								
					STD BS	140		040			2779 27 7 9		0045	, 2 1	10:		1490	4							
					STD	150	0	039	5 3498		2780	0	0045	27	110		1491 1491								
				C	BS	150	00	039	6 3498	2	2780						* 421								

IO.	SHIP	LATITU	JOE L	ONGITUDE 1/10	MARSO SOUAI	E	GMT)	Y	EAR C	ORIG CRUISE NO.	STAT	HON	_	OEPTH TO	DEPTH OF S'MPL	085	WAVE ERVATIONS	WE TH CO	ER	CLOUD CODES			NODC STATION NUMBER	
8016	EV	4050	0 N C	5019 W	150	00 05			967	9	918		3	840		1	5 2	X		0 3		_	0002	
					c	WATER DLOR TRAM	S DIR	SPEED OR FORCE	BARO- METER	ORY		/ET C	VIS.	NO. OBS. EPTHS		CIAL VATIONS	, ,	,	- ,	0.5	'	'	0002	
					-	DT S	-	S18	152		+	72	+	38										
	MESSENGR TIME 0 HR 1/10	CAST NO.	CARO TYPE	OEPTH (m)	т.	:	s °4.	SIGMA		SPECIFIC VO		≨ ∆ 0YN.	. M.		UNO	O2 ml/l	PO4-P µg = at/l	TOTAL.		NO2~N	NO3-N ug - ot/l	51 O4=5		50
												<u> </u>					1		+			7,		
	098	:	STD OBS	0000	16 16		608 6079	2640 2640		00164	06	000	00		144									
			STD OBS	0010	16 16		98 982	2646 2646		00158	48	00	16		127 127									
	003	i	ST0 085	0020	15 15		91	2659 2659		00149	71	00	3 2	15	107 107									
			OBS STD	0025	15 15		908	2658 2659		00146	59	004	46	15	105 104									
			OBS OBS	0030 0047	15 15	45 3	909	2659	9			•		15	104									
			STD	0050	15 15	6 3	07	2668	3	00138	20	00	75	15	113									
			OBS STD	0058 0075	15	66 3	064	2668	3	00125		0.1		15	113									
			OBS	0075	14	99 3	95	2672	2	00135	13	010)9	15	098 098									
			OBS STD	0088	14	35 3	966	2674 2675	5	00133	24	014	¥3		100 097									
			OBS STD	0100 0125	14	0 3	947	2675 2676	ó	00133	03	01	76		097 089									
			OBS STD	0125 0150	14. 14		860 79	2676 2678		00132	27	020	9		089 082									
			0B\$	0150 0183	14 13		610	2678 2680							082 060									
			STD OBS	0200 0200	13		65	2682 2682		00129	34	02	74		065									
			08\$ 08\$	0218 0237	12	99 3!	762	2684						150	051									
			STD OBS	0250	13:	37 35	69	2687	7 (00126	8 (033	8	15	071									
			STD OBS	0300	123	22 35	53	2687	3 (00116	35	039	9	150										
			OBS	0308	123	0 35	529 430	2698	?					150	017									
			OBS	0400	091	9 35	16 155	2720 2720		00096		050		149	949									
			STD OBS	0500 0500	074	0 35	05 054	2742 2742		000749	4	059	1	148										
			OBS STD	0560 0600	063		993 99	2752 2758		000598	32	065	9	148										
			OBS OBS	0600 0660	058 058		990 011	2758 2764						146	344									
			OBS OBS	0680 0691	055	6 35	030	2765						148	345									
			STD	0700	059	1 35	11	2769		00052	6	071	5	146	364									
			OBS STD	0700 0800	059	0 35	01	2768 2771		000492	2	076	6	148										
			OBS OBS	0800 0870	050		014 018	2771 2774						148										
			OBS STD	0880 0900	047		024 02	2774 2774		000466	7	081	4	148										
			OBS STD	0900 1000	047		019 01	2774 2776		000451	5	086	0	148	48									
			OBS STD	1000 1100	044	9 35	011	2776 2778		000447		090		148	355									
			OBS STD	1100	043	8 35	011	2778						148	367									
			OBS STD	1200 1200 1300	042	2 35	01 005	2779		000441		094		148	377									
			OBS	1300	041	0 34	99 990	2779		000446		099		148	888									
			OBS	1400	040	0 34	99 990	2780 2780		000443		103	_	149 149	01									
			ST0 OBS	1500 1500	039		99 990	2781 2781		000438	9	108	2	149 149										

CE				at la	MARSDEN	T NOITATE	IM E			RIGINATO		DE	PTH	MAX. DEPTH	085	WA	AVE ATIONS		EA-	CLOUD			NODC	
D. O.	CODE	LATITU	DE L	ONGITUDE ED	SOU ARE	MO DAY	R.1/10	YEAR	CRUISE NO.	TAT		BOT	IO ITOM	OF S'MPL'S	1		T PER SE	0.0	BIDE	TYPE A MT		N	UMBER	
16	EV	4119	N C	5017 W			132	1967		9919		36	21	15	15	3	3) X	(2	0 3		1	0003	
					COLOR		SPEED	BARO	0	IR TEMP.	/ET CO	: 0	1O. BS.	SPEC	CIAL									
					CODE	(m)	FORC	€ (mbs	s) 81.	JL8 BI	nrg	UE	ZHIG											
_					DT	SD 13	507	18	3 1	83 1	61 8	-	9			4	_		_				_	
,	MESSENGR TIME 0	CAST	CARD	DEPTH (m)	τ *c	s */	ŞIG	MA-T	SPECIFIC	VOLUME ALY-X107	∑ ∆ DYN, x 10	ğ.	VELC		02 ml/	١,	PO4-P pg = e1/1	1014		NO2-N µg - a1/l	NO3-N 1/10 + QU	\$1 O4-\$1 yg - o1/1	PH	c
-	HR 1/10	-				-	+-				X 10	+		-		+		-						1
-			 STเ	0000	1306	3511	26	49	001	5546	000	0	15	012		- 1		1						,
	132	2	OBS	0000	1306	35112		49				_		012										
			STI	0010	1300 1300	3522 35218		558 558	001	4681	001	5		013										
			STI		1200	3504		664	001	4131	003	0		979										
	003	3	OBS	0020	1200 1134	35042 34910		564 566						979 955										
			OBS OBS	0027 0028	1134	34910		566					14	955										
			ST		1142	3495		667	001	3829	004	3		959 959										
			OBS	0030 0031	1142 1250F	34945 34945		667 647P					14	959										
			0BS		1100	35020	2	681						947										
			ST	D 0050	1110	3514		689	001	1879	006	9		953										
			0BS 0BS		1110 1245	35140 35480		689 689						008										
			ST	D 0075	1240	3546	2	689	001	1935	009	9		007										
			OBS		1240 1218	35461 3542		689 690	001	1891	012	9		007										
			5T 0BS		1218	35420		690	001	. 10)1	0 - 1	. /		003										
			ST	D 0125	1199	3539		691		1824	019			000										
			ST OBS		1190 1190	3538 3538(692 692	001	11190	010	00		001										
			ST		1200	3541	2	693	001	11880	024	+7		013										
			OBS		1200 1183	3541 3537		693 693						013										
			OBS		1138	3533	_	698	001	11464	031)5		998										
			OBS	0250	1138	3533		698						998										
			0B5		1149 1148	3535 3536		698						005										
			083		1120		9 2	704						1997										
			085		1135 1038	3536 3519		701	0.0	10883	03	5.1		4969										
			S1 0B3		1038			705					14	4969										
			51		0758			735	000	08061	04	56		4879 4879										
			OB 5		0758 0714			735						4867										
			OB:	5 0438	0724	3503	5 2	743				2.0		4872										
			51		0635 0635			751	000	06537	05	29		4847 4847										
			OB:	ID 0600	0522			760	00	05733	05	90		4817										
			OB:	s 0600	0522			760						4817 4833										
			0B:	S 0650	0538 0507			2764	00	05078	3 06	44		4828										
			OB.	s 0700	0507	3498	9 2	2768				04		4828 4835										
				TD 0800	0483			2772 2772	00	04772	2 ()6	94		4835 4835										
			0B.		0470	3499	2 2	2772					1	4839										
			08	5 0860	0462			2773 27 7 5	00	04588	3 07	41		4836 4843										
			S 0B	TD 0900 5 0900	0462			2775	00	3.500			1	4843	3									
			ОВ	5 0960	0460	3501	4	2775	0.0	0461	. 07	87		4853 4842										
			S OB	TD 1000 S 1000	0421			2775 2775	00	104614	+ 01	0.1		4842										
			08		041	3499	0	2779						4843										
			08	5 1040	042			2777 2776						4850										
			OB S	S 1070 TD 1100				2777	00	0444	9 08	32	1	4851	L									
			ОВ	s 1100	040	3 3495	5	2777						4851										
			0 B 0 B					2779 2778						4860										
			0 B	5 1158	040	9 3492	2 P	27731	P															
			0.8	s 1161				27751 2778		00444	3 08	376	1	4863	3									
			08	37D 1200 35 1200				2778					1	4863	3									
			OB	1218	040	3 349	70	2778		00447	9 0	21		487										
			O B	STD 1300 SS 1300				2778 2778		JU441			1	4880	0									
			5	TD 1400	038	7 349	5	2779	0.0	00446	7 0	966		4895										
			OE	35 1400				2779 2780						l 489! l 490(
			0 E			0 349	70	2779]	1490	3									
			5	STD 1500	038	9 349		2780		00452	2 1	11		l491: l491:										
			OE	35 1500	038	9 349	10	2780						,										

REFERENCE									1											
CTRY ID.	SHIP	LATITU	DE 1/10	LONGITUDE 11/10	MARSDEN SOUARE	STATION TO		YEAR	ORIG CRUISE NO.	STATIC NUMB	N	DEPTH TO SOTTON	DEPTH DF	OBS	WAVE ERVATIONS	WEA- THER CODE	CODES		DDN STAT2	DN
318016	EV	4138		05014 W	150 10	05 12 1		967		920	К	3795	15		HGT PER SE	X 1	TYPE AMT		NUM	\dashv
					COLOR	TRANS. DIR	SPEED OR	BARD	*	TEMP. °C	- VIS	ND. OBS.	SPE	CIAL	, = , = ,	1 ~ ~	. 0.51		00	041
					DT	50 14	FORCE S10	(mbs) BULB	BUL	-	DEFINS	OBJEK	× 110N 3						
	MESSENGR TIME		CARD	DEPTH (m)	T *C	s %.	SIGMA	17	SPECIFIC VOI	16		53 SDI	UND		PD4~P	TOTA L-P	NO ₂ -N	NON		
	HR 1/10	NO.	TYPE	-			310m		ANOMALY-	×10 ⁷	₹ ∆ D DYN. <i>N</i> X 10 ³	. VEL	DCITY	0 2 ml/l	νg • ο1/1	μg = 01/1			SI O4-S1 yg - at/l	рн с
		1 1	ST	0000	1309	3511	264	8	00156	19	0000	15	013							
	170)	085 085	0000 0005	1309 1319	35110 35210	264 265					15	013							
	003	3	OBS STI	0009	1261 1331	35130 3558	265 268	9	00126	2 /.	0014	14	999							
			085 085	0010	1331 1343	35580 35583	268	0	00120	24	0014	15	028							
			STO		1355	3563	267	9	00127	57	0027	15	032 038							
			085	0025	1355	35630 35651	267 267	7				15	038 044							
			ST0	0030	1320 1320	3551 35505	267 267		00130	16	0040		027 027							
			085 STC	0039	1250 1250	35450 3544	268 268		001219	96	0065		004 006							
			085 085	0050 0060	1250 1235	35442 35418	268 268	5				150	006							
			STO		1223	3541	268	8	00120	07	095	15	002 000							
			085	0080	1223	35408 35409	268 268	8					000							
			OBS STC		1151 1148	35255 3525	269		001184	41	125		976 976							
			08s 08s	0100 0115	1148 1145	35253 35260	269 269					14	9 76 9 7 8							
			08s	0123 0125	1153 1150	35267 3527	269	0	001185	50 /	155	149	982							
			085 085	0125	1150	35265	269	1	001101	, ,	1100	149	981							
			085	0140	1131	35230 35245	269 269	3				149	975 976							
			STD 08S	0150 0150	1145 1145	3533 35330	269		001134	+5 (184	149								
			085 085	0159 0160	1174 1184	35388 35388	2696					149								
			08s 08s	0170 0188	1183 1198	35400 35442	2695	5				150	002							
			08s STD	0190	1189 1166	35442	2697	7			2	150	800							
			085	0200	1166	3542 35420	2700)	001118	18 (240	150 150								
			08S	0210 0250	1179 1050	35440 3528	2699 2710		001028	5 0	294	150 149								
			OBS STD	0250 0300	1050 0910	35279 3515	2710		000902	6 0	342	149 149								
			08\$ 08\$	0300 0350	0910 0778	35149 34995	2724	-				149	22							
			STD 08S	0400	0685 0685	3499 34988	2745	,	000703	5 0	422	148	50							
			085 085	0420	0646	34970	2749	,				148	38							
			085	0490	0642 0505	34983 34870	2751 2759					148 147								
			085	0500	0506 0506	3490 34900	2761 2761		000548	9 0	485	147								
			085 085	0508 0520	0506 0525	34947 34964	2765 2764					147	96							
			085 5TD	0590 0600	0513 0505	34957 3498	2765 2767		000503	0 0	537	148	12							
			085 085	0600 0625	0505	34975	2767		00000	, ,	231	148	11							
			STD	0700	0515 0501	35015 3502	2769 2771		000479	6 0	587	148 148								
			085 085	0700 0740		35017 35005	2771 2773					148 148								
			085 085	0787 0790		35025 35022	2775 2774					148								
			SID	0800 0800		3502 35016	2774 2774	(000459	1 0	634	148 148	32							
			STO OBS	0900 0900	0458	3502 35018	2776 2776		000447	1 0	679	148	42							
			STD	1000	0440	3502	2778		000435	7 0	723	148 148	51							
			OBS STD	1000	0419	35017 3500	2778 2 7 79	(000431	8 0	766	148 148								
			085 ST0	1100 1200		35000 3499	2779 2779	C	00431	0 0	309	148								
			085 STD	1200 1300		34990 3499	2779 2780		00430		353	148	69							
			08S STD	1300 1400	0397		2780 2781		00434		396	148	83							
400			08s STD	1400	0388	34981	2781 2781					148	96							
102			085	1500			2781		00432	. U'	39	149								

REFERENCE	SHIP					LE A	AARSDEN SOUARE	STAT	ON TI	ME .	YEAR	T		INAT			DEPTH	MA) DEPT		W.A V.R.3.2.R	VE 'ATIONS	WEA-	CLOUD			NODC	
CTRY ID.	CODE	LATITU	1/10	LONG	'1/10	[0. 1.	MD C		R.1/10	TEAK		NO.		MBER		BOTTO	A S'MPL			T PER SEA	_ cons	TYPE AM	ī		UMBER	
318016	EV	4207		050)13 W		50 20	05	2 1	94	196	7	9	92	1		3072	2 15	16	5 3	2	Х6	0 3			0005	
							WA			IN D SPEEC	BAI			TEMP.		VIS.	ND.	SP	ECIAL								
							COLOR		DIR,	FORC	ME1		DRY	8	WET BULB	CODE	DEPTH	DRZEK	VATION	,							
							DT	SD	14	Sla	2 16	69	156	,	144	6	77]		<u>L</u>							
	MESSEN	GR CAST	CAR		DEPTH (m1	т *с	s	٠/	SIG	MA-T	42	ECIFIC VO	LUME	. ₹ DY	A D	SC	LOCITY	D ₂ ml			TDTA L-P		ND3-N	SI D4~S µg = o1/		S
	HR 1/	10 NO.	TYP	E				-				Ŧ			X	103	V E1	LOCITY	ļ	۱,	19 - 01/1	ا/10 - وبر	1/10 - 61/I	µg + a1/1	pg = 017	1	-
	1	-	١ ,	TO	000	0	0992	33	5	24	517	1	00185	78	1	000	1	4888	1				l			1	
	1	94	089	TD S	000		0992		950		517	,	00102	, , ,		500		4888									
			S	TD	001		1170	35	80		573	(00132	284	0	016		4967 4967									
			0B3	S TD	001		1170 1352	35			573 578	(00128	344	0	029		5037									
	0	03	OB:	S	002	0	1352		510		678							5037									
			OB:	S TD	002		1355 1330	35	526		678 679		0012	727	0	042		5039 5031									
			OB:		003		1330		571		679				-		1	5031									
			OB:		004		1324 1264	35 35	669		680 680		00126	550	0	067		5031 5010									
			OB:	TD S	005		1264		415		680	,	00120	ں ر ر	Ü	001		5010									
			08:	S	005		1264		419		681							5011									
			0B:	S TD	007		1208	35	341 34		686 685		0012	276	0	098		4993 4995									
			0B:		007		1211		341		685						1	4995									
			OB:		008		1198 1153		329 207		687 686							4991 4974									
			0B.	-	009		1153		207		686							4976									
			S	TD	010		1148	35			687		0012	164	0	129		4976 4976									
			0B		010		1148 1167		209 260		687 687							4910									
			ОВ	S	012	0	1166	35	275	2	689					1.5		4986									
			S QB	TD	012		1180		34 340		691 691		0011	843	0	159		4993 4993									
			08		013		1170	35	330		692						1	4990									
			0 B		013		1170 1165		340 340		693 694							4991 4989									
			08 S	S TD	015		1162				695		0011	504	0	188		4991									
			08		015		1162		350		695							4991 4993									
			0B 0B		016		1160 1150		370 370		697 699							4990									
			08	S	017	6	1081		230		701							4965									
			0B 0B		018		1067		225 198		703 704							4961 4955									
				TD	020		1000	35	16	2	709		0010	238	3 0	24	2 1	4939									
			ОВ		020		1000		155		709 710							4939 4916									
			0B 0B		020		0940		030 090		721							4906									
			ОВ	S	023		0880		055		721		0000	720		291		4898 4891									
			0 B	STD SS	025		0853		06 055		726 726		0008	125	, (5 7		4891									
			08	35	026	0	0813	3 5	010	2	728							4877									
			0 B	SS STD	028		0657		835 82		737		0007	556	5 0	33		4819									
			08		030		0640		815		738		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				1	4814	+								
			08		030		0635		830 910		739							4813									
			08		034		0635		832		749							4795									
			0.8	35	038	30	0561	. 34	835	2	749							4795									
			08		031		0569 0571		888		748							4799									
			06		039	96	0577	7 34	880) 2	751					,	1	4805	,								
				STD	040		0578		90		752		0006	26	1 ()40		4806									
			0 E		040		0578		958		759						1	4812	2								
			0 8	35	04	76	0550	34	958	3 2	760							4808									
			0.6	SE STD	049		0510		920 92		762		0005	40	2 ()45		4795									
			0.5		050		0508		915		762							4795									

CIRY	EREN		SHIP	LATITUD	1/10	LONGITUOE '1/10	DRIFT	MARS SOUA	ARE		TION		YEAR	CRUISE NO.		TOR'S ATION UMBER	-	OEPTH TO BOTTOM	MAX. DEPTH OF	OBSE	WAVE	CODE	CODES		57	IOOC ATION JMBER
					1710	1710	\Box	١,٥,	WA			WINO	BARG		AIR TEN			NO.			HGT PER	IEA .	TYPE AM	T		
									COLOR	TRAN:	S. DIR	SPEEL OR FORCE	METE	R	DRY BULB	WET	CODE	OBC I	OBSERV	ATIONS						
		×	ESSENGR TIME (CAST NO.	CARE		(m)	Т	*c	2	*/	SIG	MA-T	SPECIFI	C VOLUA	2 0	△ D YN. M X 10 ³		JNO JNO	O ₂ ml/l	PO4-P µg + o1/I			NO3-N ug - at/I		рН SC

OBS	0530	0505	34915	2762			14798
OBS	0572	0488	34915	2764			14798
085	0578	0473	34910	2766			14793
STD	0600	0473	3492	2766	0005092	0510	14797
085	0600	0473	34915	2766	000-072	0.20	14797
OBS	9628	0468	34915	2767			14799
OBS	0630	0457	34910	2767			14795
OBS	0640	0461	34922	2768			14799
OBS	0650	0461	34922	2768			14800
OBS	0660	0450	34915	2769			14797
085	0680	0450	34915	2769			14801
OBS	0690	0430	34872	2767			14793
STO	0700	0430	3489	2769	0004899	0560	14795
OBS	0700	0430	34886	2769			14795
08\$	0732	0426	34878	2768			14799
OBS	0745	0444	34920	2770			14809
OBS	0752	0425	34910	2771			14802
OBS	0790	0440	34930	2771			14815
STO	0800	0440	3493	2771	0004832	0609	14816
085	0800	0440	34925	2771			14816
08\$	0812	0440	34925	2771			14818
OBS	0819	0426	34910	2771			14814
085	0860	0424	34915	2771			14820
OBS	0870	0418	34915	2772			14819
STO	0900	0421	3492	2772	0004738	0657	14825
OBS	0900	0421	34920	2772			14825
OBS	0919	0422	34930	2773			14829
085	0935	0445	34960	2773			14841
OBS	0980	0445	34985	2775			14849
STO	1000	0442	3499	2775	0004618	0704	14851
OBS	1000	0442	34985	2775		. 7	14851
STO	1100	0420	3497	2776	0004537	0749	14859
OBS	1100 1200	0420	34972	2776	0001501	. 7.05	14859
STD OBS	1200	0409	3496	2776	0004596	0795	14871
STO	1300	0409 0394	34958 3496	2776	000/510	00/1	14871
OBS	1300		3495	2778	0004519	0841	14881
STO	1400	0394 0387	34955	2778 2778	0004555	0401	14881
OBS	1400				0004555	0886	14895
STO	1500	0387 0380	34950 3495	2778 2779	0004551	0932	14895
OBS	1500	0380	34950	2779	0004551	0732	14909 14909
003	1 500	0360	J475U	2119			14909

ID.	CODE	LATITU		TONGITUDE SOUTH	SOU	ARE		ON TH	Y	EAR	CRUISE		ATIO	N	DEPTH TD	DEPTH OF	DB	WAVE SERVATION:	- 1	WEA- THER	CLDUD		, S.	NODC
NO. 016		4227	1/10 N (1/10 = 1 05012 W	10°	20		L2 2		967	NO.	992	JMBE 2	E R	2468	S'MPL"	1	HGT PER	SEA	CDDE X4	17/E AM1	1		UMBER
029		, , ,	., ,	,, ore #1 1	170	WA			מאוי	BAR		AIR TEM		VIS.	NO.	1	CIAL	12151	- 1	^4	1 0/3	1	1	0006
						COLDR	TRANS.	DIR.	SPEED OR FORCE	M ÉTI (mb)		DRY IULB	BULI	COD	DEPTH		/A TIDNS							
,						DT	SD	22	512	17	3 1	.00	10		70	l							ī	
	MESSENGR TIME 0	CAST NO.	CARO TYPE	DEPTH (m)	7	°C	S	٠/	SIGMA	T-	SPECIFIE	ALY-X10	E	₹ △ D DYN. A x 10 ³	. SC	DCITY	0 2 ml/l	PO4-P		TA E - P g - a1/1	NO2-N µg - al/l	NO3-N µg - pl/l	\$1 O4-\$1 yg • 01/1	pН
ŀ	HR 1/10						+			_			+	X 10	-				-					
	220		STO			792	334		260		001	9424		0000		806		1	,	,				
	220	J	OBS ST	0000		792 823	334		260 260		001	9274		0019		806 820								
			085	0010		823		514	260						14	820								
	003		ST(0020		865 865	339	91 910	263		001	6959		0037		843								
	003	>	085	0023		875		016	263 264							843								
			ST	0030	0	862	34	16	265		001	5085		0053		847								
			085	0030		862		159	265							847								
			OBS OBS	0039 0041		830 851	34	180 217	266 266							+836 +845								
			OBS	0047	0	847	343	315	266	9					14	846								
			STO	0050		830	343		267		001	3434		0082		840								
			08s 08s	0061		814	343		267 267							840								
			085	0070		827	344		268							844								
			STO			865	345		268		001	2403		0114		860								
			08S	0075 0088		865 808	345	-	268 268							860								
			OBS	0097		933		370	269							894								
			STI	0100		905	346		268		001	.2379		0149		881								
			OBS OBS	0120		905 669		30 485	268 270							881 791								
			ST	0125	0	646	344	45	270		001	0093		0173	14	782								
			OBS OBS	0125 0130		646 642		÷50 ÷70	270							782								
			0BS	0131		649		+70	270							782 785								
			OBS	0140		649		530	271							787								
			OBS	0145		637	345		271		0.00			0100		783								
			STI OBS	0150		641 641	345	558	271 271		000	9261		0198		786 786								
			OBS	0156		674		555	272							801								
			085	0166		620		0.2	272							781								
			085 ST[0191		634 520	346		272		000	8092		0241		792								
			085	0200		520	345		273		000	, , , , ,		0		745								
			085	0217		476	345		273							730								
			08S 08S	0220		489 506	345		273 274							736								
			STO			507	346		274		000	16955		0279		750								
			OBS	0250		507		665	274							750								
			08S	0256 0257		507 528	34	720	274 274							751								
			OBS	0279		528	34		274							765								
			OBS	0299	0	554	348		274						14	779								
			STI			544	34		274		000)6599		0312		775								
			OBS OBS	0300 0309		5 4 4	34	780 742	274							775								
			OBS			514			275							765								
			OBS	0320	0	482	34		275						14	752								
			08S 08S	0365 0380		505 544			276 276							771								
			085	0391		527		912	275						14	784								
			STO		0	527	349		276	0	000	15446		0373		786								
			08S			527 484			276 276							786								
			QBS	0486		489			276							785								
						506	349				000													
			ST(506			276 276		000	14954		042:		+795 +795								

REFER	ENCE					_	11 4 0 7	DCH	67.4	IION .			0210	IN A YOU			M.A	AX. I							1
TRY	ID.	SHIP	LATITUE		LONGITUDE	DAIFT	MARS SQU	ARE		ION 1 IGMT)		YEAR	CRUISE	STATIO	N	DEPT TO BOTTO	DEP	TH OI	WAVE SERVATIO	0.00	R CODE	2	5	NODC TATION	
				1/10	1/10		10"	1.	MO	DAY	HR.1/10		NO.	NUMB	К	-	'M' S*MI	PL'S DIR	HGT PER	SEA	TYPE AA	47		UMBER	
				1		' '	٢	WAT	ER	Τ-	WIND	BARG	AIR	EMP. °C	Τ	, NO.			ווון		1	ı	- 1		1
								COLOR	TRANS.	DIR.	SPEED	METE	R DRY	W E1		A Cas	0000	PECIAL RVATIONS							
							-	CODE	,	-	FORCI	E (mbs	, 8058	800	-	-	-		1						
		MESSENGR	CAST	CARE		_				J	<u> </u>		SPECIFIC VO	IIIME	₹ Δ t	, T	OUNO	T	, PO4-	TOTAL	1 110 11		510 5	1	-
		TIME (NO.	TYPE		m)	l '	℃	,	*/	SIG	MA-T	ANOMALY-	X107	X 10 ³	M. VI	LOCITY	O ₂ ml/	yg - 01			NO3-N µg - al/l	\$1 O4-\$i	pН	C
																					Ì				77
				085				509		970		66					4796								
				OBS				491	_	945		66					4795								
				0BS				451 457		897 930		67 69					4781 4787								
				085			-	454		940		70					4789								
				ST	D 0600)	0.4	457	34	95	27	70	00046	77	047		4791								
				OBS				457		945		70				1	4791								
				085	063			467		968		71				1	4802								
				08s	0650			487		99P		70P				,									
				085	067			487 456		960 960		68 72					4815								
				085	069			455		950 950	_						4803 4805								
				ST			-	442	34		27		00045	60	051		4801 4801								
				085				442		951	27		000.5	~ ~			4801								
				OBS	072		04	+22	34	949	27	74				1	4797								
				085	0750			+66		998	27					1	4820								
				085	0790			468		998	27						4827								
				ST 085	0800 0800			+65	35		27		00045	99	056		4828								
				085	0830			465 445		998 995	27						4828								
				085	086			455		997	27						4824 4834								
				ST				450	35		27		00045	26	061		4838								
				085	0900)	0.4	+50	34	997	27						4838								
				ST				+31	35		27		00043	99	065	5 1	4847								
				OBS	1000		-	+31		996	27						4847								
				ST				+17	350		27		00043	22	369		4858								
				085	1100 D 1200			+17	34	996	27 27		00044	5.0	74:		4858								
				085	1200		-	404	-	968	27		00044	27	J14.		4869 4869								
				ST				394	34		27		00044	24	78		4869 4881								
				085	1300			394		968	27		30017				4881								
				ST	D 1400)	03	87	34	96	27		00044	60	083		4895								
				OBS	1400			387		963	27						4895								
				ST				880	34		27		00044	71	376	-	4909								
				085	1500)	03	380	34	961	27	80				1.	4909								

REFERENCE	SNIP					- # 	MARS	OEN		ION TI	ME			ORIGIN	A TOR	S		OEFTN	MAX		w	AVE		VEA-	crono			NODC	
CODE NO.	CODE	LATITU	1/10	LONG	1/10	INDC	SQU.			GMTI	1/10	YEAR	CRUIS		STATIC	N ED		TO BOTTOM	0.5	1		VATION		HER	TYPE AM			MOITAT	
-	Eve	(.224		050		-	100	-		DAY H		1017	1			-	+		3 MILE	-	-	GT PER	25.4		1				
31 8016	EV	4236	IJ€	050)11 W	l j	150	20 WAT			38	1967			23		_[0534	0.5	24	- 14	2	1	X 4	013	i		0007	
							ł	COLOR	TRANS		SPEED	BAR	o-	AIR TE	WE	- 1	/15.	NO. 085.		CIAL									
								COOL	(m)	DIR.	FORC			IULB	BUL		ODE	GEPTHS	OBSEK	VATIONS	,								
							Ì	DT	50	26	507	14	9 (89	08	9 4		34											
	MESSENGE	CAST	CAI								I		[[[]	C VOLU		≥ ∧	0	100			1	00 0	T						5
	TIME	T NO.	TYE		DEPTH (m)	Т	°C	5	*/	\$IG.	MA-T	ANON	ALY-X1	107	₹ Δ 0YN. x 1	M.		OCITY	03 ml	4	PO4-P µg = 01/I	TOTA - gu		NO2-N μg - ot/l	NO3-N pg - aVI	\$1 O4-\$1 yg = 01/1	ρН	Ċ
	HR 1/10			-					+		+		-				•	+			-		+-	-			-		
	72/	! !	0.0	_ !	000	0		3070	21.	220	1 77	370			- 1			1	ļ		1		1	1			l		11
	238	5	0B 0B		001			5070 5720				820																	
	001	1	OB		002			3400				60Q																	
			ОВ		003			6150				920																	
			ОВ	S	004	3	0	8260	34	25Q	26	670																	
			08		005			9120				80Q																	
			OB	-	006			6190				890																	
			OB		007			6510				000																	
			0B 0B		008			6930 3620				910																	
			08		010			4340				430																	
			08		011			3730				220																	
			08	S	012	5	0	4180	34	260	27	200																	
			08	-	014			422		350		27						14	693										
			_	TD	015			439	34			23	000	860	4				700										
			ОВ		015			439	_	329		23							700										
			0B		015		_	421	_	329		25		. 7 7 0					694										
			0B	TD	020			444 444	34	452		33	000	778	6				712										
			08	_	020			441		440		732							712										
			OB		022			479		520		734							732										
			OВ		023		0	479		575	_	738							734										
			08	S	024	0	0	501	34	560	27	35						14	744										
			S	T O	025		_	502	34	_	27	736	000	751	6			14	746										
			08		025			502		582		36							746										
			OB		028			511		731		47							758										
			0B 0B		029		_	538 523	_	725 749		43							770										
				10	030			540	341			47	0.07)641	6				765										
			0 B		030		-	540		798		49	000	7041	U				773										
			ОВ	_	032			636	_	945		48							817										
			ОВ		037			482		856		60							762										
			ОВ	-	039	0		522		909		60							782										
				TO	040			488	34			62	000	0522	3				769										
			ОВ	_	040			488		391		62							769										
			ОВ	_	041			474		394		64							765										
			08		042			489		914		64							773										
			OB OB	-	043			462 457		910 927		67							765										
			OB	5	04/	0	Û	407	54	721	2 8	69						14	770										

REFERENCE				MARSDEN	STATION TO		ORIGINAT	OR*S	DEPTH		WAVE	WEA	- CLOUD	Ţ		NODC
CTRY ID. CODE	LATITU	1/10 L	ONGITUDE		(GMT)	YEAR		TION	10017001	OF	ERVA TIONS	CODE			5	TATION
318016 EV	4245		5010 W								HGT PER SI	-	ITPL AM	7		
1 210010 [4]	7247	МІО	JOIO W	WAT		12 1967	A ID TEAL P		0128	01 23	3 3	X4	013	1		0008
				COLOR	TRANS. CIR	SPEED MET	0.	WET COD	NO. 085.	SPECIAL						
				CODE	lmi	FORCE (mb	s) BULB	BULB	DEPTHS							
	,		,	DT	SD 22	S10 16	6 078	078 3	21							
MESSENGR TIME (CAST	CARO TYPE	DEPTH (m)	7 ℃	s */	SIGMA=T	SPECIFIC VOLUME ANOMALY-X107	X .03	. SOUN		PO4-P ug = a1/1	TOTA L-P pg = nt/l	NO ₂ -N μg - οι/Ι	NO3-N NO3-N	SI O4-Si ا/اه - وبر	рН
											 				-	
'	, ,	STD	0000	0314	3286	2619	0018375	0000	146	03	1	ı	1	ı	ı	' '
012	2	OBS	0000	0314	32858	2619			146	03						
0.0	2	085	0003	0314	32840	2617			146							
003	3	OBS OBS	0006 0008	0269 0279	32870 32880	2624			145							
		STD	0010	0260	3287	2624 2625	0017821	0018	145 145							
		085	0010	0260	32874	2625	001/021	0016	145							
		STD	0020	0152	3293	2638	0016598	0035								
		085	0020	0152	32934	2638			145							
		OBS	0027 0030	0034	33118	2659			144							
		STD 08S	0030	0038 0038	3312 33117	2659	0014547	0051								
		OBS	0035	0051	33150	2659 2661			144 144							
		OBS	0048	-0019	33292	2676			144							
		STD	0050	-0015	3330	2676	0012885	0078								
		OBS	0050	-0015	33301	2676			144							
		OBS	0056	0065	33297	2672			145							
		085	0068	0023	33350	2679			144							
		08S STD	0070 0075	0021 0040	33370 3343	2680 2684	0013100	0110	144							
		085	0075	0040	33428	2684	0012180	0110	145							
		OBS	0082	0064	33430	2683			145							
		OBS	0095	0060	33441	2684			145							
		STD	0100	0090	3356	2692	0011444	0139								
		085	0100	0090	33562	2692			145	30						
		085	0110	0105	33553	2690			145							
		085	0115	0097	33590	2694			145							
		085	0119	0110	33580	2692			145	43						

REFERENCE SHIP CODE NO. CODE COD	1/10		D 20		YEAR	O- AIR TEMP. ER DRY V BULB B	ION SER E	DEPTH MAX. DEPTH OF S'MPL'S 0064 00 NO. OBS. DEPTHS OBSERVAT	WEA-CLOUTHER COO	Z Z	NDDC STATION NUMBER
MESSENGR CAST TIME OF NO. HR 1/10	CARD TYPE	DEPTH (m)	t °c	s ·/	SIG MA-T	SPECIFIC VOLUME	₹ △ 0 DYN. M. x 10 ³	SOUNG O	TOTAL-P NO2-P		
022	STD OBS OBS STD OBS OBS STD OBS OBS STD OBS STD OBS STD OBS STD OBS OBS OBS OBS	0000 0007 0010 0010 0012 0019 0020 0020 0030 0035 0045 0050	0524 0524 0523 0500 05443 0448 0428 0378 0378 0378 0378 0378	3322 33219 33210 3317 33170 33302 3340 3341 33410 33413 33410 33495 33535 33537 33569	2626 2625 2625 2625 2625 2641 2651 2651 2657 2657 2667 2670 2675	0017691 0017809 0015348 0014798	0000 0018 0034 0049	14696 14696 14697 14687 14687 14666 14670 14662 14662 14643 14643 14628 14636 14622 14623 14623			

REFERENCE SHIP LATITUDE LONGITUDE CODE NO. CODE 1/10 1/10	MARSOEN	STATION TIME (GMT)		CRUISE STATI	ON	DEPTH OFFTH OF S'MPL'S DIR.	WAVE SERVATIONS HGT PER SEA	WEA- CLOU	ES	STA	ODC TION MBER
318016 EV 4438 N 04920 W	149 49 (05 13 122	1967	9926		0062 00 14	2 2	x1 0	3	0	010
	COLOR CODE	TRANS. DIR. SPE	BAKU	R DRY W BULB BU	ET CODE	DEPTHS					
	TO	50 14 51	0 14	6 094 0	83 6	13					
MESSENGR CAST CARD DEPTH	m) I °C	s */ s	IGMA-T	SPECIFIC VOLUME	₹ △ 0 0YN. M x 10 ³	SOUND VELOCITY 02 ml.		OTAL-P NO2- ug - 61/1 ug - 01		SI O4-Si yg - 01/1	рн С
510 000	0 0439	3273	2597	0020482	0000			1			
122 085 000			2597 25 9 7			14654 14656					
085 000 STD 001			2598	0020382	0020						
002 OBS 001	0 0428	32730	2598			14651					
OBS 001			2598 2606			14652 14618					
OBS 001			2606			14615					
STD 002	0 0306		2611	0019134	0040						
0B5 002			2625 2630			14566 14559					
OBS 002 STD 002	-		2634	0016927	0058						
OBS 003	0 0219		2634			14568					
OBS 003		2	2640 2660			14538 14541					
OBS 000			2670			14547					
STD 00!	0 0159	3336	2671	0013415	0089	9 14550 14550					
OBS 001	0 0159	33360	2671			14220					

									_							. MA	y			Crono	Т		NODC	
REFERENCE	SHIP						PSDEN UARE	STATION T	IME	YEAR		ORIGIN			DEPTH	1 OEPT	H OR	WAVE SERVATIONS		CODES		S.	MOITA	
CTRY ID.	COOE	LATITU	- 1	LONG			11"	MO DAY I			CRUIS NO.		TATIO		BOTTO	M S'MPL	L'S DIR	HGT PER S	CODE	TYPE AM	τ	N	UMBER	
CODE NO.			1/10		1/10	10	-				_	+ -			028			2 2	X1	0 3			0011	
318016	6 EV	4435	N	049	055W	14			132	1967	'	99			038	+ 0.	2 12	1 2 1 2 1	^1	1 012	l		0011	
							WA		MIND	BAR		AIR TE			NO.	SP	PECIAL							
							COLOR	TRANS. DIR.	SPEE	1		ORY BULB	BULE		DEPTH	SOBSER	RVATIONS							
							_		FOR	0.5	-		0.7	0 6	25	+								
							DT	SD 16	51	8 13	39	089	07					-						T.
	MESSENGR		CAF	RD G	0.50511.4		t 'C	5 %.	611	GMA-T	SPECIF	ic volu	3 M	₹ A D	S	OUNO	O2 ml/	PO4-P	TOTAL-F		NO3-N	\$1 O4-\$1 µg - a1/1	рН	Č
	TIME	NO.	11/	PE	OEPTH (m J	, ,	1	311	3 MA-1	ANO	MALY-X	10'	x 10 ³	. ٧	LOCITY		pg + a1/1	μg - 61/l	h8 - 01/1	yg - ai/i	pg - 0071		1
	HR 1/10		-						\top															
	1	1		- 0	0.00	_	0210	3287	1 2	620	1 00	1825	1	0000	1	4601	1	'	'					
		_		TD	000		0310	32870		620	00	1023	-	0000		4601								
	13	2	OB	-	000		0311	32850		618						4603								
			ОВ		001		0275	3282		619	0.0	1834	-8	0018		4587								
	0.0	2	0 B	TD	001		0275	32820		619	•					4587								
	00	2		TD	002		0090	3288		637	0.0	1665	6	0036	5 1	4508								
			OB		002		0090	32877	2	637					1	4508								
			08		002		0069	32890	1 2	639					1	4499								
			08		002		0065	32891	. 2	639						4498								
				TD	003		0055	3291	2	641	0.0	162	50	005	-	4494								
			ОВ		003	0	0055	32905	2	641						4494								
			ОВ		004	0	0015	32920) 2	644						4478								
				GTS	005	0 -	-0029	3297	2	650	0.0	1539	53	008		4460								
			08	35	005	0 -	-0029	32970		650						4460								
			OB	35	006		0025	33010		653				010		4464								
				TD.	007		-0055	3305		658	0.0	1463	3 3	012		.4453 .4453								
			OB		007		-0055	33049		658		. 1 / 2		016		4451								
			-	STD.	010		-0070			1662	00	142	1 2	015		4451								
			OB		010		-0070			662	0.0			019		4451								
				5TD	012		-0079			6666	00	138	50	019		4451								
			OE		012	-	-0079			2666	0.0	137	25	022		4457								
				STD	015		-0075			2667 2667	0 (1121		022		4457								
			OE	-	015	-	-0075			2668						14453								
				35	015		-0086 -0076			2671						14462								
				35	017	-	0075			2703	0.0	0103	83	028		14542								
				STD	020		0075			2703	3.					14542								
				BS	020		0311			2738	0.0	0072	33	033	1	14663	3							
				STD BS	025		0311			2738		_				14663	3							
				BS	026		0311			2739						14665	5							
				B.S	026		0314			2745						14668	3							
				B5	026		0322		-	2744						14672								
				B 5	027		0322	-		2744						14673								
				BS	028		0326	3446	8 2	2746						14677								
				STO	030		0340	3453		2749	0.0	0062	35	036		14686								
				BS	030	00	0340	3452	-	2749						14686								
				BS.	034	+0	0372	3464	0 .	2755						14708	3							

REFERENCE CTRY 10.	чнг	LATITU	IDE I	LONGITUDE	MARSDE	STA	TION TI		YEAR		GINATO		1	DEPTH TO	MAX. DEPTH	OR	WAVE	WEA-	CLOUB			NODC	1
CODE NO.	CODE	*	1/10	1/10	NOUNARE SOUNARE	· MO	DAY H		ILAK	NO.	STA1		80	мотто	OF S'MPL'S	DIR	MGT PER SE	THER	TYPE AMI		S	UMBER	
318016	EV	4432	$n \mid 0$	04850 W		8 05			967		9928		1	646	15	15	2 2	X1	03			0012	
					_	WATER		SPEED	BARO)* 	TEMP.		S.	NO. 085.	SPEC	IAL							
					co	DE (m)	DIR,	FORCE	(mbs			VET CO	D	EPTHS	OBSERVA	MONS							
		,			0	T SE	16	524	15.	2 078	3 0	72 0		43									
	MESSENGR TIME	CAST NO.	CARD	OEPTH (m1 [°C		1/	SIGM	A-T	SPECIFIC VE	DLUME	₹ △ DYN.	D M.	SOU		0 2 ml/l	PO ₄ -P	TOTA L-P	NO ₂ -N	№3-и	SI 04-51	рН	S
	HR 1/10											X 10	3	VELO	CIII		pg = 01/1	J/10 - Qu	yg − at/l	yg - al/l	μg = at/I		c
		1	ST [©]	000	016	1 32	88	263	. 2	0017	103	000	^	145	136		1					l	
	146	5	085	000	016		875	263		0011	.00	000	U	145									
			STE				87	263		0017	142	001	7	145									
			OBS STE	001			870	263 263		0017	154	003	/.	145									
	003	}	OBS	002			B64	263		0017.	100	003	4	145									
			STO				97	264		00158	166	005	1	145	02								
			085	003			966	264		00151		0.00	_	145									
			STC OBS	0050			998	265		00153	031	008	2	144									
			STO	007	-001		05	265		00148	331	012	0	144									
			085	007			048	265						144	74								
			STC OBS	0100			15 152	266 266		0013	720	015	5	144									
			OBS	0110			171	266						144									
			STO				22	267		00132	221	018	9	144									
			OBS	012			220	267						144									
			STE OBS	0150			32	268		00123	97	022	1	144	_								
			STO				76	270	_	00103	351	027	8	145									
			085	0200	015	0 33	760	270						145									
			OBS	021			806	270						146									
			08S	0220			728	270		00090	16.1	032	۷.	145									
			OBS	025			930	271		00090	741	032	0	145									
			OBS	026			310	272	4					147									
			OBS OBS	0280			324	272						147									
			STE				363 41	272		00078	165	036	a	147									
			OBS	0300			413	273		50071	000	0.20	7	147									
			OBS	0319			514	273						147									
			0B5 0B5	0330			615 620	274						147									
			085	0380			666	274						147									
			STO	0400	049	1 34	64	274	2	00071	.27	044	4	147									
			OBS	0400			640	274						147									
			OBS OBS	0415			643 550	274						147									
			SID				65	275		00055	22	050	7	147									
			OBS	0500			647	275						147	22								
			OBS OBS	0520 0540			690	275						147									
			QB5	0555			660 650	275 275						147									
			OBS	0570	035	3 4	676	276						147									
			STD					276		00054	40	056	2	147									
			085 085	0600			690 769	276 276						147									
			SID					276		00053	32	0616	6	147									
			OBS	0700	040	3 3 4	793	276	3					147									
			085	0750			860	276						148									
			0BS STD	0770			857 87	276 276		00052	68	066	g	148 148									
			085	080			871	276		30032		000	,	148									
			STD			5 34	90	276	7	00052	83	072	1	148	39								
			OBS	0900	045	34	903	276	7					148	39								

IO.	SHIP	LATITU		LONGITUDE	MAR SOU	ARE		GMT		YEAR	CRUISE NO.		TATION UMBER	-	DEPTH TO BOTTON	MAX DEPTI OF S'MPL	H OBS	WAVE ERVATIONS	WEA- THER COOE	CLOUG		ST	ODC ATION JMBER	
NO.			1/10	1/10	- 10*	1,	MO E	YAI	HR.1/10		110.		O MIDEN			3 4176	. 3 DIR.	Hull rex 2	-	777, 2.11.				
																				į l		!	Į	
						WA	TER		MIND	BARC)- 	AIR TEA		- vis.	NO.	SP	ECIAL							
						COLOR	TRANS.	DIR.		METE (mbs		ULB	WET	COD	OBS.	OBSER	ZNOITAV							
						0000		-	FORCE	(, ,			+	-	-								
							Ļ		1,					\perp	<u> </u>									
	MESSEN	CAST	CARD	DEPTH (m	, ,	°C	,	٠/	SIGA	AA-T		VOLU/		AN. M		UND	O2 ml/l	PO ₄ -P	TDTA L-P		NO3-N	\$104-\$	рΗ	IC.
	HR 1/1	of NO.	TYPE	OLFIA UI	' '		1		1 310		ANOM	ALY-X1	, -	x 103	. AET	OCITY		pg = 01/1	yg + o1/1	nd - 01/f	yg - a1/1	h8 - 01/J		C
	718 77 1	<u> </u>					\top																	
		1	I	1	1		1		1				'		1		1	'	'					
			STE	D 1000	()455	34	91	27	68	000	533	6 0	774	14	856								
			OBS)455	34		27	68					14	856								
			STI		(447	34	91	27	69	000	532	2 0	826	14	869								
			OBS		(3447	34	912	2. 2.7	69					14	869								
			ST)446	34	93	27	70	000)527	0 0	883		+886								
			OBS	1200	()446	34	931								+886								
			ST)442	34		27		000	0527	4 0	933		+901								
			OBS)442		937						0 0 0		901								
			ST)434	34		27		000)525	2 0	986		4914								
			OBS			1434		939					- 1	0.20		4914								
			STI)427	34		27		000)524	7 1	039		+928								
			OBS	1500) ()427	34	94(27	73					1 4	+928								

REFERENCE	SHIP	LATITU	OF IC	NGITUOE NOUTE	MARSDEN SQUARE	STATION TI.	ME	YEAR		GINAT			OEPTH	MAX.	081	WAVE	WEA-	crono		$ \Gamma$	NOOC	1
CODE NO.	COOE		1/10	NGITUOE SOUTION	10° 1°	MO DAY H	2.1/10	TEAK	CRUISE NO.		TION MBER	8	TO BOTTOM	OF S'MPL"		HGT PER SE	THER	TYPE AM		2	TATION	
318016	EV	4430	N O	4836 W	149 48	05 13 1	58	1967	7. 9	9929	9	1	2286	15	16	4 2	Xl	0 3			0013	
					WA		INO	BAR	U	TEMP.	v	/1S.	NO. OBS.	SPE	CIAL	1 . 1	1		1	'	0012	1
					COLOR	TRANS. OIR.	SPEED OR FORCE	M ET (mb			WET CO		OBS. DEPTHS	OBSERV	ATIONS							
					ОТ	50 16	522	15	6 106	5 7	100 6	5	55									
	MESSENGR TIME O	CAST	CARO	DEPTH (m)	т *с	5 %	SIGA	14 7	SPECIFIC V	OLUME	₹ △ OYN.	0	sou	NO		PO4=P	TOTAL-P	NO ₂ -N	NO3-N	51 0451		s
	HR 1/10	NO.	TYPE	DEFIN DN)	' '	3	2167	14-1	ANOMALY	X10 ⁷	X 10	03°	VELO	CITY	O 2 m1/1	yg - 01/i	νg - α1/1	1/10 - Bri	yg - 01/1	yg - ot/		č
	138		STD OBS	0000	0514 0514	3354 33535	26. 26		00152	211	000	00	146									
	100		STD	0010	0362	3339	26		0014	756	001	15	146									
			OBS	0010	0362	33394	26						146									
	004		OBS	0011	0295	33577	26						146									
			OBS STD	0013	0343	33590 3361	26 26		00129	944	002	0	146	528								
			OBS	0020	0341	33610	26		0012	, 44	002	- 7	146									
			085	0027	0293	33630	26	82					146									
			STD OBS	0030	0338 0338	3367 33672	26		00124	+56	004	+2	146									
			OBS	0032	0275	33650	26						146									
			OBS	0039	0411	33806	26						146									
			OBS	0047	0250	33863	270						145									
			STO OBS	0050 0050	0253 0253	3389 33890	270		00100	98	006	4	145									
			OBS	0052	0229	33902	270						145									
			OBS	0065	0225	34037	27						145									
			STD	0075	0253	3408	27		00086	90	008	88	146									
			OBS STD	0075 0100	0253 0295	34078 3427	27:		00076	. 7 2	010	0	146									
			OBS	0100	0295	34270	27		00070	12	010	, 0	146									
			OBS	0102	0285	34290	27						146	27								
			OBS STO	0110 0125	0300 0375	34330 3448	27		00068	222	012		146									
			OBS	0125	0375	34475	27		00000	رود	012	.0	146									
			STO	0150	0396	3454	274	+5	00065	76	014	3	146	85								
			OBS OBS	0150 0168	0396 0397	34540 34573	274						146									
			OBS	0182	0347	34573	274						146									
			STD	0200	0398	3470	275	57	00054	44	017	3	146									
			OBS	0200	0398	34700	275						146									
			OBS OBS	0205 0215	0370 0427	34730 34733	276						146									
			OBS	0220	0414	34738	27						147									
			OBS	0239	0440	34771	275						147									
			STD OBS	0250 0250	0425 0425	3475 34751	275		00053	95	020	0	147									
			OBS	0253	0419	34777	276						147									
			OBS	0261	0437	34789	276						147									
			OBS	0269	0430	34795	276						147									
			OBS OBS	0286 0294	0450 0425	34817 34870	276						147									
			STD	0300	0456	3488	276		00048	324	022	5	147									
			OBS	0300	0456	34880	276	55					147	40								
			OBS OBS	0308	0451 0469	34862 34860	276						147									
			OBS	0340	0469	34863	276						147									
			OBS	0351	0438	34873	276						147									
			STD	0400	0457	3491	276		00047	13	027	3	147									
			OBS STD	0400 0500	0457 0446	34911 3492	276		00046	1.2	032	0	147									
			0B5	0500	0446	34922	277		00046	12	032	U	147									
			STD	0600	0432	3492	277	71	00045	46	036	6	147									
			OBS	0600	0432	34923	277	71					147	80								

											1 14 63	_							
REFER	ENCE	SHIP			- #	MARSDEN	STATION TIN		ORIGINATO	R*S	GEPTH DEPT		WAVE ERVATIONS	WEA-	CLOUD			ODC ATION	
CTRY	ID.	CODE	LATITU		NGITUDE	SOUARE		YEAR	CRUISE STAT		OTTOM S'MPL		HGT PER SEA	1 5005	TYPE AM			JAABER	
CODE	NO.			1/10	1/10 ==	10" 1"	AO DAY HE	1,1/10	NO. NO.	N DEN	3 MT	. 3 DIR.	HG: PEK SEA	+	11115 1211	-			
															1	1		í	
						WAT	R W	IND BAR	AIR TEMP.	°C VIS.	NO. SP	ECIAL							
						COLOR	TRANS. DIR.	SPEED METE		/FT CODE		ZHOITAV							
						CODE	(m)	FORCE (mbs	1) BULB B	050									
		MESSENGE	CAST	CARD					SPECIFIC VOLUME	₹ △ O DYN. M.	SOUNG	01/1	PO4-P	TOTAL-F	NO2-N	NO3-N	5104-51	рН	SCC
		TIME	T NO.	TYPE	DEPTH (m)	7 °C	s */	SIGMA-T	ANOMALY-X187	X 103	VELOCITY	O 2 m1/l	μg = α1/l	µ₽ + 01/1	yg - at/!	µg = a1/1	µg - סו/	p,,,	C
		HR 1/10	-					_											\Box
							l		l	1		I			ı		'		1 '
				C = D	0700	0416	3492	2773	0004468	0411	14790								
				STD	0700	0416	34922	2773	0004400	0-11	14790								
				OBS	0766	0408	34952	2776			14798								
				OBS	0774	0421	34937	2774			14804								
				OBS	0781	0412	34936	2774			14802								
				STO	0800	0413	3494	2774	0004419	0455	14805								
				085	0800	0413	34937	2774			14805								
				OBS	0870	0410	34951	2776			14816								
				085	0882	0395	34929	2776			14811								
				STD	0900	0397	3494	2776	0004338	0499	14815								
				OBS	0900	0397	34935	2776			14815								
				STO	1000	0397	3495	2777	0004305	0542	14832								
				OBS	1000	0397	34952	2777			14832								
				OBS	1089	0397	34955	2778			14847								
				STD	1100	0389	3495	2778	0004291	0585	14846								
				085	1100	0389	34953	2778			14846								
				STD	1200	0385	3495	2779	0004324	0628	14861								
				OBS	1200	0385	34954	2779			14861								
				STD	1300	0377	3496	2780	0004304	0671	14874								
				OBS	1300	0377	34955	2780			14874								
				STD	1400	0374	3496	2780	0004337	0714	14890								
				OBS	1400	0374	34957	2780		. 7	14890								
				STD	1500	0371	3496	2780	0004376	0758	14905								
				OBS	1500	0371	34958	2780			14905								

CTRY ID.	SHIP	LATITU		LONGITUDE	DRIFT	MARSDEN	STATION T (GMT)	ME	YEAR	CRUISE	ORIGINA 2	TATION		DEPTH TO	MAX. DEPTH		WAVE ERVATIONS	WEA- THER	CLOUES		\$	NODC	
318016	EV		1/10	1/10	=	10. 1.	MO DAY H		1047	NO,		UM8ER	-	BOTTOM	S*MPL*	-	HGT PER SEA		TYPE AMI		N	UMBER	
1 210010	ol co l	4427	N	048215w		149 48 WA		176	1967		993		\vdash	3200 NO.	15		2 2	X1	013			0014	
						COLOR	TRANS. DIR.	SPEED OR FORCE	METI (mbs	ER C	ORY JLB	WET	CDDE		SPE VR328O	CIAL 'ATIONS							
						OT	SD 16	520	15	2 1	00	094	6	46									
	MESSENGR TIME Q HR 1/10	CAST	CARD TYPE	DEPTH	(m)	1 °C	s */	SIG/	7-AN	SPECIFIC	VOLUA ALY-X10	ME D	∆ D rN. M k 10 ³	. VELC	CITY	O ₂ ml/l	PO4-P pg = 01/t	TOTAL-P ug = at/l	NO2-N ug - a!/l	NO3~N	\$1 O4~\$i yg = a1/1	pHI	200
																				-			#
	174		STI OBS	000 000		0266 0266	3314 33140	26 26		001	585	1 0	000		586								
	174	'	ST.			0260	3321	26		001	527	в о	016		586 586								
	000		OBS	001		0260	33210	26						14	586								
	003		OBS ST	001 002		0089 0125	33240 3328	26 26		001	3791	ρ Λ	030		512 529								
			OBS	002		0125	33280	26		001	2170	0	030		529 529								
			OBS	002		0159	33350	26	70					14	546								
			OBS	003		0130 0130	3333 33330	26 26		001	345(0	044		534 534								
			OBS	003		0005	33320	26							554 478								
			ST			-0050	3347	26		001	1445	0	069	144	457								
			0BS	005 006		-0050 0120	33470 33690	26 27							457 539								
			085	007		0380	33940	26							658								
			STO			0350	3391	26		001	0803	3 0	096	146	645								
			085 085	007 008		0350 0330	33910 33980	26 27							645 638								
			OBS	009		0365	34110	27							657								
			STI			0415	3418	27		000	9463	3 0	122	14	680								
			OBS OBS	010 010		0415 0295	34175 34160	27 27							680								
			ST			0405	3433	27		000	8228	B 0	144		630 682								
			OBS	012		0405	34329	27							682								
			STI OBS	015		0310 0310	3431 34310	27 27		000	7478	3 0	164		646 646								
			OBS	016		0316	34410	27						146									
			085	017		0387	34500	27	42						685								
			OBS ST	019		0365 0372	34535 3455	27		000	4206	- 0	198		679								
			085	020		0372	34550	27	_	000	0 5 0 2	, 0	190	146	5 84								
			OBS	020	9	0351	34590	27	53					146									
			OBS ST	024		0415	34710 3472	27		000	E 2 / 1		127		710								
			OBS	025		0400	34720	27 27		000	2362	2 0	227	147	706 706								
			OBS	025	1	0385	34725	27	60						700								
			STO OBS	030		0445	3481	27		000	5224	+ 0	254	147									
			085	031		0445 0412	34810 34770	27 27						14	734								
			OBS	032	9	0411	34780	27						14									
			OBS	034		0503	34910	27						147									
			OBS OBS	035		0488 0512	34930 34951	27						147									
			ST			0505	3497	27		000	4852	2 0	304	147									
			OBS	040		0505	34968	27						147	778								
			OBS OBS	042		0481 0496	34955 34988	27						147									
			ST			0470	3497	27		000	4536	0	351	14									
			085	0500		0470	34970	27						147	780								
			STO OBS	060		0447	3497	27		000	+373	3 0	395	147									
			085	069		0447 0420	34970 34941	27 27						147									
															. , ,								

REFER	ENCE	SHIP				FE	MARS			TION				DRIGIN	ATO	r*s	DE			WAVE	WEA-	CLOND			NDDC
CIRY	ID.	CDDE	LATITU	- 1	LDNGITUDE	DRIFT						YEAR	CRUIS ND		ITATE M UP		BOT	DI	: "	BSERVATIONS	CDDE	CODES	_		TATION
-	140.	-		1/10	1710		10°	1°	MO	DAY	HR,1/10		- NO	+-	NU M	DEX	1.4	S'AA P	L*S DIR	HGT PER SEA	1	TYPE AM	1		
													<u> </u>							_					
							-	WA	TER	-	WIND	BAR		AIR TEA	MP.	C v	s N		PECIAL						
								COLDR	TRAN	S. DIR		101611		DRY	W BU	ET CO	DE DEP	THS DASE	RVATION	s					
							ŀ	0000	-	+	FORC	£ (o.	+		-	-	+	_		-					
									<u> </u>	_			L_		L.,				,						
		MESSENG	CAST	CAR		(m.)	т	°C		٠/٠.	SIG	MA-T		IC VOLU		₹ △ DYN.	8.6	SOUND	02 m	PO4-P	TOTAL-P	NO2-N	NO3-N		
		HR 1/1		TYP	E			-		•	1 270		ANO	MALT-EI	0,	x 10		VELDCITY	1	Pg = 01/1	1\10 • gu	µg + al/l	µg = 01/1	νg + σ1/1	pr.
		I	'	1	1				ı				1				'		1	1 '			ı	1	
				S	TD 070	0	0	403	34	95	27	76	00	0410	9	043	8	14785							
				08	S 070	0	0	403	34	950	0 27	76						14785							
				S	TD 080		0	40B	34	96	2.7	77	00	0418	9	047	9	14804							
				08:				408		961		77						14804							
					TD 090			402		96		77	0.0	0420	5	052		14818							
				08				402		196		77						14818							
					TD 100			402		97		78	00	0423	3	056	4	14835							
				0 B.				402	-	971		778		0/10				14835							
				0B	TD 110			391 391		+97 +97		779 779	0.0	0419	, 1	060	16	14847							
					TD 120			381		•97		780	0.0	0415	,	064	7	14847							
				0 B				381		•971		80	00	0415	1	004	1	14859							
					TD 130			379	-	97		81	0.0	0421	9	068	19	14875							
				08				379	-	971		81	0.0			0 - 0		14875							
					TD 140			380		198		81	0.0	0428	2	073	2	14892							
				08				380		97		81						14892							
					TD 150	0	0	380	34	98		781	0.0	0433	2	077	5	14909							
				0.8	s 150	0	0	380	34	98	0 27	781						14909							

REFERENCE SHIP LATITU	IDE LON	NGITUDE SCOTIEN	MARSDEN SOUARE	STATION T	IME	YEAR	OR CRUISE	GINA	TOR'S	=	DEPTH TO	MAX, OEPTH	OBS	WAVE	WEA-	CLOUD		1	ODC	
CODE NO.	1/10	GITUDE TOO		MO DAY H			NO.	NU	JMBER		BOTTOM	2 WIFE		HGT PER SEA		TYPE AMI		N	JMBER	
31 8016 EV 4424	N 04	807 W	149 48 WA		188 VINC	1967	1 4.10	993 TEMI		\sqcup	3347	15	15	5 3	X1	0 3			0015	
			COLOR		SPEEO	WELL	R DR	<i>i</i>	WET	VIS.	NO. OBS. DEPTHS	SPE OBSERV	CIAL							
			DT	SD 16	S25		-	-	116	6	52									
MESSENGR CAST	CARO	DEPTH (m)	1 10	s */	SIGI	MA-T	SPECIFIC V	OLUM	£ \$		SOI	UND	0. =1/1	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SI O4-Si		5
HR 1/10 NO.	TYPE		-		310.	WA-1	ANOMAL	Y-X107		△ D (N. M (10 ³	. VEL	OCITY	O ₂ ml/l	µg - e1/I	μg + 61/l	pg - at/l	μg - α1/I	μg = at/l	рН	C
	STD	0000	0333	3300	26	28	0017	464	. 0	000	14	613			ŀ					
188	OBS	0000	0333	33000	26	28					14	613								
	STD OBS	0010	102 1 1021	3457 34573	26	60 60	0014	463	. 0	016		908 908								
003	STD	0020	1053 1053	3470 34700	26 26		0014	078	0	030		922								
003	OBS	0021	1067	34701	26	62						922 928								
	STD OBS	0030	1005 1005	3471 34710	26 26		0013	232	0	044		907 907								
	OBS	0032	0929	34702	26							879								
	OBS STD	0045 0050	1050 1044	34891 3489	26 26		0012	585	0.1	070		928 92 7								
	085	0050	1044	34891	26	81	0012			. , .	14	927								
	OBS STD	0073 0075	0970 0975	34870 3492	26 26		0011	290	0	100		903 906								
	OBS	0075	0975	34920	26						14	906								
	OBS OBS	0085 0090	1058 1016	35230 35150	27 27							942 926								
	OBS	0095	1130	35229	26		0011	2 2 2	_	1 2 4	14	969								
	STD OBS	0100 0100	1095 1095	3521 35210	26 26	97	0011	222	Ų	128		957 957								
	03s 08s	0110	1031 1034	35140 35148	27 27							935 938								
	STD	0125	0961	3508	27	10	0009	997	0	154	14	911								
	OBS OBS	0125 0131	0961 0969	35079 35110	27 27							911 915								
	STD OBS	0150 0150	0910 0910	3503 35032	27 27		0009	585	0	179		896								
	OBS	0190	0772	34877	27							896 848								
	STD OBS	0200 0200	0799 0799	3491 34908	27 27		0008	915	0.	225		860 860								
	085	0230	0671	34830	27	35					14	815								
	08S 08S	0239 0240	0683 0662	34830 34843	27 27							821 813								
	STD	0250	0690	3497	27	43	0007	36	0	265	14	827								
	08S 08S	0250 0253	0690 0698	34965 34965	27 27							827 831								
	OBS STD	0290	0461P 0568	3485P 3489	27 27	62P	0006	075	^	298										
	OBS	0300	0568	34890	27		0006	0 75	0.	- 90		786 786								
	08S 08S	0310 0320	0523 0529	34822 34831	27 27							768 772								
	OBS	0349	0455	34775	27	57					14	746								
	OBS OBS	0352 0377	0493 0499	34891 34893	27							764 770								
	OBS	0379	0483	34869	27	61					14	764								
	OBS STD	0390 0400	0497 0485	34891 3489	27		0005	187	0	354		772 768								
	OBS	0400	0485	34891	27	63					14	768								
	OBS OBS	0415 0445	0461 0549	34889 35017	27							761 804								
	08S	0465 0490	0489 0479	34950 35005	27	67					14	782 782								
	STD	0500	0500	3501	27	70	0004	506	04	+03	14	793								
	OBS OBS	0500 0520	0500 0506	35009 35005	27							793 798								
	STD	0600	0476	3500	27	72	0004	497	04	448	14	799								
	OBS	0600	0476	35000	27	72					14	799								

REFER	RENCE	SHIP		24	DNGITUDE	NOCTE NOCTE	RSDEN	STAT	ION IGMT	TIME	YEAR	1	RIGINA			DEPTH	MAX. DEPTH	OB	WAV			WEA-		DES		S	NODC
CODE	ID.	CODE	LATITU		PURGITORE	5 g					I E AIN	CRUISE NO.		MBER		BOTTOM	S'MPL"	S DIR.	HGT I	FR S	FA (CODE	TYPE	AMT		1	UMBER
CODE	NO.	1		1/10	1/10	10"	1.	MO	UAT	HR.1/10		1.01			-		3		1				_				
												<u></u>			بلہ				, 1	ļ	- 1		l	1		1	
							WA	_	_	WINO	BAR	>	IR TEM		VIS.	NO. OBS.	SPE	CIAL									
							COLOR	TRANS (m)	OIR		1-1		ULB	W ET BULB	CODE	DEPTHS	OBSERV	ZHOITA									
							CODE	+	+-	FORC	E (-	-		_												
								<u> </u>						_					1		1	- 1					_
		MESSENGR	CAST	CARO	OEPTH (m)	т °с	s	٠/	SIG	MA-I		VOLUM	€ <u>₹</u>	A D		JND	02 ml/		04-P		A L-P	NQ ₂		NO3~N	S1 O4-S yg - q1/	
		HR 1/10	Y NO.	TYPE	00,,,,							ANDM	ALT-AID.	×	103	VELC	DCITY		29	- m1/l	μg	- 01/1	ng -	01/1	yg - at/l	pg - 017	-
			1	l	1	1		1		'		1				1			,								
				STD	0700	0	0447	35	00	27	76	000	4256	0	492	14	#C3										
				085	0700	0	0447	35	000	27	76						804										
				STD	080	0	0429	35	00	27	778	000	4143	0	34		813										
				085	080	0	0429		000		778						813										
				STO	090	0	0415		00		779	000	4074	0	575		824										
				OBS	090		0415		000		779						824										
				STD			0401	_	98		779	000	14125	0	616		834										
				OBS	100		0401		98		779						834										
				STC			0387		97	_	780	000	4112		657		845										
				OBS	110		0387		97		780	000			699		858										
				STE			0379		97		780	000	14147	U	099		858										
				OBS	120		0379		96		780	000	V. 1 7 c	0	740		873										
				STO			0375		97		781	000)4176	. 0	740		873										
				OBS	130		0375		96		781 781	000	4198		782		888										
				STO			0370		196		781	000	,	, 0	. 52		888										
				0BS ST	140 150		0370		97		781	000)4275		825		905										

[
REFERENCE SHIP LATITU	IDE LO	ACITADE FE	MARSDEN SOUARE	STATION TI	ME	, c	ORIG11	STATIOI		DEPTH	MAX. DEPTH OF	OBS	WAVE	WEA- THER	CLOUD		NO AT2	DC TION
CODE NO.	1/10	1/10 Z		MO CAY H		\perp	NO.	NUMBE	R	BOTTON	S'MPL'S		HGT PER SEA	CODE	TYPE AM		NU	MSER
318016 EV 4423	N 04	754 W	149 47		03 196	7		32		3475	15	15	5 2	X1	0 3		0	016
			COLOR	TRANS. DIR.	SPEED	ARO- ETER	DRY	MP. °C	VIS.	NO.	SPEC							
			DT		FORCE .	mbs)	BULB	BULB		DEPTHS								
			101	SD 16	S25 1	56	117	10		49	Щ,							
MESSENGR CAST TIME OF NO. HR 1/10	CARD	DEPTH (m)	τ ℃	s */	SIGMA-T		PECIFIC VOLI	JAK E 107	₹ △ 0 2YN. M X 10 ³	. SO VEL	UND	O2 ml/I		01AL-P	NO2-N pg - ot/l		1 O4-Si	pH
148 1710						+		-	X 10	+-	-+					pg - 007 1		
	STO	0000	1165	3480	2652	' (001521	.7 (0000	14	960		! !	'	,	1	1	1
203	OBS STD	0000 0010	1165 1162	34802 3480	2652 2653	,	001518		0015		960 961							
	OBS	0010	1162	34802	2653	,	001716	0 1	1015		961							
004	STD OBS	0020	1132 1132	3477 34771	2656	(001491	.0 (0030		951							
004	STD	0030	1069	3481	2656 2670	(001359	16 (0045		951 931							
	085	0030	1069	34805	2670		,		, ,		931							
	0BS 0BS	0031 0035	1058 1064	34830 34849	2674 2674						928							
	STD	0050	0992	3478	2681	(001258	3 (0071		931 906							
	OBS OBS	0050 0062	0992 0989	34775 34779	2681						906							
	OBS	0069	0909	34845	2682 2686						907 912							
	STD	0075	0990	3480	2683	(001243	5 (102	14	910							
	OBS OBS	0075 0088	0990 0983	34798 34800	2683 2684						910 910							
	STD	0100	0985	3481	2685	(001230	4 (133		912							
	08S STD	0100 0125	0985 1061	34812 3512	2685 2696		001134	2 (1/2		912							
	OBS	0125	1061	35122	2696	(JU1134	2 (162		948 948							
	OBS	0132	1016	35005	2695					14	931							
	08S STD	0136 0150	1074 0996	35180 3508	2698 2704	(001060	0 0	190		955 928							
	OBS	0150	0996	35082	2704					14	928							
	08S 08S	0188 0195	0873 0824	34945 34945	2714 2721						887 870							
	STD	0200	0847	3495	2718	(000931	9 (240		879							
	OBS OBS	0200 0220	0847 0773	34950 34890	2718						879							
	085	0232	0830	34990	2725 2724						854 879							
	STD	0250	0770	3495	2730	C	000827	1 (284	14	858							
	OBS OBS	0250 0268	0770 0703	34950 34888	2730 2735						858 834							
	OBS	0282	0699	34919	2738						835							
	08S STD	0297 0300	0718 0708	34985 3496	2740 2739		00743	0 0	323		846							
	OBS	0300	0708	34955	2739		100743	9 (1223		842 842							
	OBS	0310	0691	34962	2742					14	837							
	OBS OBS	0315 0325	0720 0684	35035 34999	2744 2746						851 838							
	OBS	0340	0728	35122	2750						859							
	STD OBS	0400 0400	0593 0593	3492 34915	2752 2752	0	00634	2 0	392		813							
	085	0440	0411	34750	2760						813 742							
	OBS	0461	0387	34741	2762					14	736							
	STD OBS	0500 0500	0507 0507	3495 34950	2765 2765	0	00513	0 0	449		795 795							
	085	0510	0541	35015	2766					14								
	08s 08s	0540 0570	0541 0479	35018 34960	2766 2769					148	816 795							
	STD	0600	0480	3497	2769	0	00478	3 0	499		795 800							
	OBS OBS	0600 0630	0480	34968	2769					148	800							
	OBS	0675	0507 0466	35012 34992	2770 2773					148	817 807							
										¥ -7 (

IO.	SNIP	LATITU	DE LO	30 MGITUDE	MAR SOU	SOEN ARE	ŧ	ON THE	YE AR	CRUIS		ATOR'S TATION NUMBER		OEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S		WAVE SERVATION HGT PER	s ;	WEA- THER CODE	CLOU COD	ES	NOO ITATZ IMUN	ON	
						WA COLOR COOE		W DIR.	SPEED MI	ARO- ETER nbs)	AIR TE	MP. "C WET BULB	VIS	NO. OBS. DEPTHS	SPE(OBSERV			!					-	
	MESSENGI TIME HR 1/10	약 NO.	CARO	OEPTH (m)	1	°°	S	٠/	SIGMA-T		FIC VOLU	07 (E △ D NN. M X 10 ³		DCITY	O ₂ ml/	PO4=F µg = 61/			NO2~1			рН	Š.
			ST0 08S ST0	0700	()466)466)442	35 35 35	001	2774 2774 2776		0448	_	0545	14	812 812 818									
			08S STC 08S	0800 0900 0900	(0442 0418 0418 0400	34 34	001 99 991 97	2776 2778 2778 2778		0417		0631 0673	14	818 825 825 834									
			ST0 OBS ST0 OBS	1000 1100 1100		0400 0395 0395	34 34 34	970 98 975	2778 2779 2779	00	0420)3	0715	14 14	834 848 848									
			ST0 085 ST0	1200 1300	(0384 0384 0378 0378	34 34	97 970 97 969	2780 2780 2781 2781		0419		0757 0799	14	860 860 875 875									
			08S ST0 08S	1400	1	0370 0370 0370 0378	3 4 3 4	97 969 99	2781 2781 2782		00419		084	14 14 3 14	888 888 909									
			oBs	1500		0378	34	990	2782					14	+909									

GTRY ID.	SHIP	LATITU	IDE	LONGITU	DE IN	MARS SQU	DEN	STATION	TIME	Y	EAR	CRUISE		ATDR'S		ĺ	TO C	MAX. DEPTH	0851	WAVE	WEA- THER	CLDUD		A ST	IDDC ATION	
318016		4419	1/10 N	04733	1/10 Z	10°	47	MD DA			047	ND,	1	UMBER		\vdash		'MPL'S		HGT PER SE	CDDE	TYPE AM	.1	N	JMBER	
, 31,001	9 - 1	771)	. 14	04133	· •• I	[WAT		WINC		967 BARD	_ A	99 AR TEA	J J NP. ℃	VIS,	T	749	15 SPEC		3 2	X1	013	1		0017	1
							CDLOR	TRANS.	1R. 1	EED OR ORCE	(mbs		DRY ULB	WET BULB	COD	DE	DBS.	BSERVA	TIDNS							
			r				DT	SD 1	.6 S	30	15	9 1	50	139	_	_	38								_	
	MESSENGR TIME HR 1/10	or NO.	CAR TYP	D DE	PTH (m)	Т	*C	s °/.	. :	SIGMA	1-A	SPECIFIC		ME C	∆ D YN. M X 10 ³		SDUNI VELD CI		02 ml/l	PO4-P µg = 01/1	TOTA L P μg - σt/t	NO2-N µg = a1/I	NO3-N yg - ai/l	\$1 D4-\$i ug - 01/1	рΗ	S
																1										\forall
	22:	3	51 0B3		0000		367 367	3529 3528		265 265		001	543	6 (000)	1503									
			S1 085		010		366 366	3530 3529		265 265		001	540	0 (015	5	1503	36								
	00	3	S1 083	rD o	020		370 370	3533 3533	;	265 265	2	100	523	6 (031	L	1503	39								
			S1	rD 0	030	10	380	3551		266	4	001	416	7 (045	ō	1503	46								
			089 089	5 0	1030	1	380 433	3550 3569	4	266 266							1504									
			S7 OB9		050 1050		408 408	3568 3567		267 267		001	356	6 (073	3	150 <i>6</i>									
			S1 089		075		269 269	3539 3539		267 267		001	300	3 (106	,	1501	15								
			S1 085	D 0	100	1:	200	3527 3526	-	268	1	001	269	6 0	139)	1499	94								
			085	5 0	110	1	199	3528	8 2	268 268	3						1499	96								
			ST 085		125		247 247	3541 3540		268: 268:		001	258	0 0	170)	1501									
			0B3		130		179 189	3523 3525		268: 268:							1499									
			ST	D 0	150	11	162	3521 3521	4	268	5	001	251	1 0	201		1498	39								
			089	5 0	170	10	78	3509	5 2	268: 269	1						1498	51								
			ST 085	5 0	200	1:	180 180	3544 3544		269° 269°		001	129	1 0	261		1500									
			S1 085		250 250)64)64	3531 3531		2710		0010	030	0 0	315	•	1497									
			0Bs		270 288		005 396	3521 3509	0 2	271 272	3						1495	3								
			OBS	0	298	0 9	30	3512	0 2	2718	8		07.0		2		1492	29								
			OBS	0	300 300	0 9	904	3510 3510	1 2	272 272		0009	928	4 0	364		1491									
			08s		351 377		796 303	3506 3513		273! 2740							1488									
			ST		400 400		772	3513 3513	2	2744	4	000	722	5 0	446		1488	36								
			OBS	0	470	04	40	3477	7 2	2759	9				·		1488	0								
			ST OBS	0	500 500		571 571	3500 3500	0 2	276. 276.		000	556	3 0	510		1482									
			0BS		510 575		86	3502 3503		276 276							1482									
			ST OBS		600 600		33	3497 3497	2	76:	3	0005	5420	0 0	565		1482	22								
			OBS	0	660 700	04	57	3495	3 2	277	1	000		, ,	. 1 .		1480	1								
			QBS	0	700	04	58	3496 3496	3 2	2772	2	0004	4664	4 0	616		1480 1480									
			ST OBS		800 800		58	3499 3499		2774 2774		0004	457	1 0	662		1482									
			ST OBS		900 900		32	3498 3498	2	2776 2776	5	0004	4414	4 0	707		1483 1483	1								
			ST	D 1	000	04	31	3500	2	2777	7	0004	437	7 0	751		1484	7								
			ST	D 1	100	04	09	3499 3499	2	777	9	0004	4273	3 0	794		1484	4								
			OBS ST	D 1	100 200	03	98	3498 3498	2	779	7	0004	+288	3 0	837		1485 1486									
			OBS ST		200 300		98	3498 3497		779		0004			880		1486 1487	6								
			OBS	1	300 400	03	88	3497 3497	0 2	780)						1487	9								
			OBS	1	400	0.3	181	3497	0 2	780)	0004			923		1489	3								
			ST OBS		500 500		73	3497 3496		781 781		0004	+336	0	967		1490 1490									

														TMAX		WAVE	WEA	- CLOUI			1000	
	ERENCE 10.	SHIP	LATITU	DE L	LONGITUDE H	MARSDEN SOUARE	STATION THE	AE Y	EAR	CRUISE !	ATOR'S		DEPTH	DEPTH	OBSE	RVA TIONS	THE	COOE	2	51	ATION	
COD	E NO.	COOE	*	1/10	1/10	Z 10° 1°	MO DAY HE	.1/10		NO.	NUMBER		BOTTOM	3 1017 €		HGT PER SI	^	11112 A.1				
3	1801	6 EV	4415	N C	04715 W	149 47		01 1	967		34 MP. ℃		3840	15	15	5 3	X1	. 0 3	i l	(0018	
						COLOR	I	SPEED	BARC	R ORY	WET	VIS.	,00 ,280	OBSER	CIAL							
						COOE	lm1	FORCE	lmbs	BULB	BULB	+	DEFINA									
						Ta	SD 16	528	<u> </u>	156	144		38						1	1		T.1
		MESSENG		CARD	OEPTH (m)	T °C	s */	SIGM	1-A	SPECIFIC VOLU	JME 107	Z A D	SOI VEL	UNO	O2 ml/l	PO 4~P µg = 01/I	TOTAL- ug-et/			\$1 O4-\$1 1/10 - QU	рΗ	è
		HR 1/10		TYPE							-	X 10 ³				7.	-	-	-	-		+
				C 7.0	0000	1548	3589	265	7	001477	75 (0000	15	100		l		1	1			1.1
		00	1	STI OBS	0000	1548	35889	265		001.7		,		100								
		0.0	-	STI	0010	1547	3589	265		001478	35 (0015		101								
		0.0		085	0010	1547 1547	35889 35889	265						101								
		00	3	0BS STI		1544	3586	265		001497	71	0030		102								
				OBS	0020	1544	35859	265						102								
				STI		1491	3579	266		001439	97 1	0044		086								
				08S	0030	1491 1458	35788 35771	266						077								
				ST		1457	3577	266		00138	74	0073	3 15	078								
				OBS	0050	1457	35771	260		00100		010		078								
				ST! 085		1370 1370	3563 35629	26		00132	18	0106		052								
				085		1370	35610	26					15	054								
				085	0092	1324	35525	26				- 1 -		038								
				ST		1317 1317	3551 35505	26		00131	51	0139		037								
				08S		1310	35536	26						036								
				ST	D 0125	1323	3554	26		00131	18	017		0044								
				OBS		1323	35535	26 26						5044 5044								
				08S 08S		1321 1299	35510 35498	26						5038								
				ST			3551	26		00129	58	020		5040								
				OBS		1300	35505	26						5040 5042								
				08S			35524 35434	26 26						5017								
				ST			3555	26		00119	93	026		5035								
				085				26		00111	7.0	022		5035 5010								
				ST OBS			3544 35441	27 27		00111	18	032		5010								
				ST				27		00102	98	037	9 1	4962								
				085				27		00000	2.0	04.7		4962								
				ST				27 27		00083	20	047		4902 4902								
				089 089			34930	27						4843								
				SI	0500	0578	3488	27	51	00065	43	0>4		4823								
				089										4823 4814								
				083 083									1	4835								
				OBS	0550	0571	34975	27	59					4829								
				083					61	00054	87	060		4839								
				S1 QB5					63	0000	31	000	1	4837								
				51	TD 070	0516	3501	27	69	00050	37	065		4832								
				083					73	00046	71	070		4832								
				S* OB:	TD 0800				73	00040	7.6	0,0		4831								
					TD 090				74	00045	90	075		4839								
				ОВ:	5 090				74	000/5	. 21	080		4839								
					TD 100 S 100				76	00045	151	000		4850								
				0B:	TD 110				77	00044	+54	084	4 1	486	L							
				0B:	s 110	0 0424	34990		777	0.000		0 4 0		486								
					TD 120				779 779	00043	48	088		.487 .487								
				0B:	S 120 TD 130				779	00044	+23	093	32 1	488	3							
				08	5 130	0 0398	3 3497	2 7	779			00-		488								
					TD 140				780 780	00044	+ 34	U.A.	77 1 1	.4891 .4891								
				08	S 140 TD 150				780	00044	444	102		491								
				08					780				1	491	0							

REFERENCE	SHIP	LATITU	DE	LONGITUDE	INDCTR N	ARSDEN DU ARE	STATION TE	WE	YEAR		RIGINA		\exists	DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUD		1	100C	
COOE NO.	COOE	*	1/10	1/10	0 = 1		MO DAY H			CRUISE NO.	ST. NI	ATION		воттом	OF S'MPL'S	OiR.	HGT PER SE		TYPE AMI		H	UMBER	
31801	EV	4407	N	04634 W	14	9 46)34	1967		993 IR TEM		\sqcup	3931	15	15	5 2	X1	03			0019	
						COLOR	TRANS. DIR.	SPEEC OR FORC		R O	RY	WET BULB	CODE	NO. OBS. DEPTHS	SPEC OBSERV								
						DT	SD 16	523		3 1	50	144	7	33									
	MESSENGR TIME (CAST HO.	CARD	ОЕРТН	(m)	7 °C	s */	SIG	MA-T	SPECIFIC	VOLUM	E OY	△ 0 N. M.	SOL	OCITY	0 2 ml/l	PO4-P µg = 01/1	TOTAL-P	NO2~N VI - 01/1	NO3-N µg - at/l	\$1 O4-\$1 yg - 01/1	рН	S
	HX 1710											+								-			+
	032	,	ST OBS			1561 1561	3586 35857		51	001	5287	0	000		104								
	052	L	ST	D 001	0	1556	3586	26	53	001	5189	0	015	15	104								
			0B5			1556 1513	35860 3590		53 65	001	4041	. 0	30		104 092								
	004	+	OBS	002	0	1513	35896	26	65					15	092								
			ST 0BS			1489 1489	3586 35858		67	001	3844)44	15	086 086								
			ST 085			1472 1472	3580 35800		67	001	3973	0	72		083								
			ST	D 007	5	1413	3569	26	71	001	3638	0	106		083 067								
			OBS ST			1413	35690 3561		71 77	001	2176		140		067								
			085	010		1358	35612		77	001	1110	0.	40		052 052								
			ST OBS			1322 1322	3555 35548		79 79	001	3003	0	172		043 043								
			ST			1267	3552		88	001	2191	0	204		029								
			0BS 0BS	015		1267 1297	35523 35547		84						029 041								
			085	017		1271	35470		83						033								
			OBS	017		1256 1282	35530 35552		91						030 041								
			0BS ST			1237	3550		92	001	1914	0	264		026								
			OBS			1237	35501 3543		92				2 2 1		026								
			S1 085	025		1149 1149	35426		03	001	0959	0.	321		003								
			08S	026 D 030		1070	35244 3521		04	001	0034	0.	374		975 955								
			085	030	0	0999	35210		14	001	0036	0.	,,4		955								
			08s	034 037		0930 0829	35103 35022		17 27						935 902								
			51			0775	3504		36	000	7956	04	+64		886								
			08s	040 047		0775 0639	35038 34923		36 46						886 843								
			OBS	048	1	0659	35005	27	50					14	854								
			ST OBS			0652 0652	3501 35005		51	0000	6607	0	37	14	854 854								
			ST	D 060	0	0559	3501	27	63	000	5481	0	97	14	833								
			OBS ST			0559	35008 3501		63 69	0004	4972	0.6	549		833 831								
			OBS	070	0	0512	35012	27	69					14	831								
			51 085			0487	3501 35007		72 72	0004	4808	00	98		837 837								
			ST	D 090	0	0444	3498	27	75	000	4570	0	745	14	836								
			085 51			0444	34981 3501		75 76	0004	4515	0.	790		836 855								
			OBS	100	0	0449	35011	27	76					14	855								
			ST 085			0430	3500 34998		77 77	0004	4471	08	335		863 863								
			ST	D 120	0	0417	3499	27	78	000	4462	04	880	14	874								
			0BS ST			0417	34990 3499		78 79	000	4397	0.	924		874 886								
			OBS	130	0	0404	34989	27	79					14	886								
			ST 085			0390	3497 34972		80	000	4432	0.0	969		897 897								
			ST	D 150	0	0380	3496	27	79	000	4500	10	13	14	909								
			085	150	U	0380	34957	27	79					14	909								

																					1
REFERENCE	T			. =	MARSDEN	NIT MOITATE	ME		ORIGIN	ATOR'S		DEPTH	MAX.		WAVE SHORT AVASE	WEA-	CLOUD			NODC TATION	
CTRY ID.	CODE	LATITU	- 1	NGITUDE	SOUARE	(GMT)		YEAR		STATION NUMBER		TO BOTTOM	OF S'MPL	1		THER	TYPE AM		1 ,	UMBER	
CODE NO.	10000	· .	1/10	1/10	10 1	MO DAY HE					-		_	1	1 1			-		0070	1
31801	6 EV	4359	N 0	4553 W	149 35			967		36	- 1	4023	13	19	5 2	X1	013	ł	- 1	0020	1
					WA	TER W	IND	BARO	AIR TE		VIS.	NO.	SPE	CIAL							
					COLOR	TRANS. DIR.	SPEED	(mbs		WET	CODE	OBS. DEPTHS	OBSERY	SHOFF							
					-		FORCE	+	-	156		25									
					DT	50 19	524	16	6 167			20	L		Ц——					Т	
	MESSEN	CAST	CARD	DEPTH (m)	T *C	s */	SIGM	A-T	SPECIFIC VOLU	IME :	E A D		JND	O2 ml/	PO4-P	TOTAL-P	NO2-N	NO3-N	2-4012		ć
	HR 1/1	NO.	TYPE	Derin our	' "	" "	370		ANDMALT-I	10'	x 10 ³	VEC	CITY		yg = a1/1	µg - at/l	μg = at/i	yg - a1/l) pg - 01/	!	
	1111	<u> </u>																		-	
	ł	1	STD	0000	1392	3535	264	49 '	001550	ວວ່ (0000	15	043		1 .						
	0.6	4.5	085	0000	1392	35348	264					15	043								
		,	STD	0010	1350	3536	265	59	001460	9 (0015	15	031								
			OBS	0010	1350	35360	265	59					031								
			STD	0020	1298	3540	267	73	001331	12 (0029		016								
	00	3	OBS	0020	1298	35403	26	73					016								
			STD	0030	1279	3537	26		001320)4 (0042		011								
			OBS	0030	1279	35372	26						011								
			STD	0050	1269	3536	261		00131	53	0069		011								
			obs	0050	1269	35359	26		0.130	, ,	0101		011								
			STD	0075	1282	3542	26		00130	51	0101		020								
			oBs	0075	1282 1298	35415 3547	26		00130	0.0	0134		030								
			STD	0100	1298	35470	26		00130	77	0134		030								
			OBS	0100 0125	1295	3549	268		00128	9.8	0166		034								
			STD OBS	0125	1295	35492	261		00120	30	0.100		034								
			STD		1293	3549	261		00129	17	0199		037								
			OBS	0150	1293	35492	26			-		15	037								
			STD		1204	3530	261	83	00127	46	0263	15	013								
			085	0200	1204	35303	26	83				15	013								
			STD	0250	1093	3528	27	02	00110	27	0322		982								
			OBS	0250	1093	35280	27						982								
			OBS	0257	1115	35370	27						+992								
			obs	0287	0984	35130	27						+947								
			STO		1030	3524	27		00103	78	0376		+967 +967								
			OBS	0300	1030				00084	9.0	0470		+967 +880								
			STE		0762	3494 34940	27 27		00084	0 7	0770		+880								
			OBS	0400	0762	34940	27		00066	60	0546		856								
			STO	0500	0658 0658	35009			00000	-	J- 40		856								
			OBS		0587	-	27		00058	34	0608		+845								
			STO	0600	0587				30030	J-7	5500		4845								
			OBS STC		0516		27		00052	0.8	0664		4832								
			OBS	0700	0516								4832								
			STE		0463		27		00046	77	0713	-	4827								
			OBS	0800	0463							14	4827								
			ST	-	0447			73	00046	81	0760		4837								
			OBS	0900	0447	34971	27	73					4837								
			STO	1000	0429			75	00045	58	080		4846								
			obs	1000	0429			75			- 0.0		4846								
			STI	1100	0425			76	00046	07	085		4861								
			OBS	1100	0425			76			0.00		4861								
			ST		0404			78	00044	59	089		4869								
			OBS	1200	0404			78	00044	6.0	094		4869 4882								
			ST					79	00044	28	094		4882 4882								
			OBS	1300				79					4882 4888								
			OBS	1340	0393	34965	21	79				Α.	-000								

REFERENCE	SHIP	LATITU	JOE L	ONGITUOE SOUTIDNO	MARSDEN SOUARE	ITAT2	ON TIM		YEAR	CRUISE		ATOR'S		13.D	D D	MAX.	OBSE	WAVE	WEATHER	CLOUG			OITATZ	
CODE NO.	COOE		1/10	· '1/10 0 =		MO O	AY HR.			NO.		UMBER	_	BOTT	7044	OF MPL*S		HGT PER SE	CODE	TYPE A MI			NUMBE	R
31801	6 EV	4351	.5N 0	4510 W	149 35 WA		4 1 (967		99		1	45	72	15	18	5 3	X 2	0 3			002	1
					COLOR	TRANS.		SPEED OR	BARO	R O	JR TEA	WET	VIS.	NC OB	35.	SPECI	AL							
					COOE	(m)		FORCE	(mbs)		JLB	BULB	_	UEP	1113									
	MESSENGR			1	TO	SD	20 3	520	193		56	139	-	91	0	_								
	TIME HR 1/10	or NO.	CARO TYPE	DEPTH (m)	τ °C	5 '	1	SIGMA	A-T	SPECIFIC	VOLU:	ME N	△ 0 N. M.	٠ ،	SOUNC		2 mi/1	PO4-P	101AL-P ug - oi/l	NO2-N μg - α!/l	NO3-N pg - al/l	\$1 O4-		н С
	17.17.10	-												+					_		-	-		
	1 100		STD	0000	1023	343		263		001	648	4 0	000		1490			1	ł	1			1	1
	103	3	085 STD	0000	1023 0850	343		263 266		001	382	5 0	015		1490 1484									
			OBS	0010	0850	343		266	7						1484	1								
	003	3	STD OBS	0020	0940 0940	345		267 267		001	305	9 0	029		1488 1488									
			OBS	0025	0969	346	20	267	3						1489									
			STD	0030	0958 0958	346 346		267 267		0013	309	7 0	042		1488 1488									
			085	0040	0948	346		267							1488									
			OBS OBS	0043 0048	0938 0951	346 346		267 267							1488									
			STD	0050	0939	346		267		0012	285	3 00	068		1488 1488									
			085 085	0050 0068	0939 0931	346 347		267							1488									
			STD	0075	0915	347		268 268		001	1856	5 00	99		1488 1488									
			085	0075	0915	347		268						1	1488	1								
			08S 08S	0079 0087	0909 0938	347		269							1488 1489									
			OBS	0093	0895	347	18	269	3					1	1487	7								
			OBS STD	0097 0100	0969 0965	350 350		270 270		0010	136	2 0	126		1490 1490									
			OBS OBS	0100	0965	350	31	270 270		0010	,,,,,	2 0	120		1490									
			085	0103 0105	0965 1001	350 350		270							1490 1492									
			085	0119	0996	350	55	270							1492									
			STD	0125 0125	0955 0955	349		270		0010	055	7 0	152		1490									
			STD	0150	0653	345		271		0009	949(0	177		1490 1479									
			0BS 0BS	0150 0162	0653 0597	345 345		271							1479									
			085	0172	0724	348		272							1477 1482									
			OBS OBS	0183 0197	0777	349		273						1	1485	0								
			STD	0200	0787 0762	349 348		272		0008	3603	3 0	223		1485 1484									
			085	0200	0762	348		272						1	1484	6								
			08S 08S	0207 0215	0710 0716	348 348		273							1482 1483									
			OBS	0221	0632	347	45	273	3					1	1479	7								
			08S 08S	0226 0233	0628 0637P	347 346		273						1	1479	6								
			085	0240	0575	346	97	273	7						1477									
			STD	0250 0250	0577 0577	347 347		2738		0007	1438	3 02	63		1477 1477									
			OBS	0253	0584	347	18	273	7					1	1478	2								
			085 085	0256 0267	0553 0545	347	_	274							l 477(l 476									
			OBS	0276	0570	347	47	274	1						1478									
			0BS 0BS	0285 0290	0560 0563	347		2743 2743							l 4771 l 4781									
			STD	0300	0546	347	7	2746	6	0006	713	3 02	98		477									
			085 085	0300 0308	0546 0547	347		2746 2746							477									
			085	0312	0526	347	75	2749	9						4769									
			085 085	0322 0328	0520 0550	347		2750 2749							4768									
			OBS	0331	0530	348	40	2753							4782									
			OBS OBS	0348	0544	3486		2753						1	4784	4								
			085	0370 0387	0525 0532	348		2751 2758							L478(L4786									
			OBS	0396	0523	349		2761							4784									

																		,								1
	EFERE		SHIP	LATITU	IDE LO	NGITUDE	ORIFT	MARSE	DEN RE	STATION	TIME	YEAR		ORIGINA		_	DEPTH	MAX.	OBS	WAVE ERVATION:	WE THE	R CDDES			NODC	
CO	DE	NO.	CDDE	*	1/10	1/10	, P 2	10°		MD DAY			CRUIS	N	UMBER		BOTTOM	S'MPL"	S DIR	HGT PER	COI	TYPE AM			NUMBER	
	\top																									
'	- 1				'		, ,	ľ	WAT	ER _	WIND	BAR	De	AIR TEA	A.P. ℃		NO. OBS.		CIAL		,		•			
								9	CODE	TRANS. D	IR. OF	FD LAST	ER	DRY BULB	WET BULB	CODE	OBS.		ATIONS							
								-	- 00:	(m)	FOR	CE (mb:	*/	0060	BULO	\vdash										
				1		_												L			T					
			MESSENG TIME	CAST ND.	CARD	DEPTH	[m]	т	°C	5 %	. 51	GMA-T	SPECIFI	AALT-XI	ME ₹	△ D N. M (10 ³	SDI	DCITY	O2 ml/l	PO4-P pg = at/1	TOTAL-		ND3-N 99 - 01/I			S C
			HR 1/10	1		-									,	(103	-	JOIL 1		pg - 0171	pg - u.) pg - ui/ i	99 - 6171	1 20 - 0	***	\dashv
										}			İ								1					
					ST0	040	0.0	0.6	30	3492	2	760	000	0551	2 0	359	14	787								
					OBS	040			30	3492		760	001	JJJ1	2 0			787								
					OBS	041			33	3494		761P														
					QBS	041			56P			759P														
					OBS	043			15	3492		762						786								
					0B5 0BS	044			13	3496 3496		765 764						787								
					085	044			25	3495		763						796								
					OBS	047	7 1	0 9	03	3495	8 2	766					14	788								
					ST0	050			+96	3496		767	00	0493	6 0	412		790								
					OBS OBS	050 056			+96 +82	3495 3495		767 768						790								
					OBS	058			164	3495		770						790								
					STD	060			+62	3496		771	00	0462	6 0	459		793								
					OBS	060			462	3496		771						793								
					OBS	061			464	3497		771						796								
					085 085	062			469 463	3496		770						799								
					085	064			455	3495		771						796								
					OBS	065			452	3496	0 2	772					14	798								
					OBS	067			462	3496		771						805								
					STD	070			455 455	3497		772	0.0	0458	3 0	505		807								
					OBS OBS	073			451	3492		769P					14	1001								
					OBS	074			429	3496		775					14	803								
					OBS	075			445	3496		773						812								
					OBS	076			443	3497		774						812								
					08s 08s	07			448 437	3491		2773 2774						+816 +814								
					085	079		_	437	3494		772						+815								
					STD				433	3494	+ 2	772	00	0463	6 0	552	2 14	814								
					085	080			433	3494		772						814								
					OBS	083			412	3494		775						808								
					0BS 0BS	083			413 420	3499		2776 2775						+811 +814								
					085	084			413	3496		777						813								
					085	08	73	0	436	3497	77 2	775					14	828								
					STD				427	3498		776	00	0438	2 0	597		828								
					OBS	090			427	3491		2776	0.0	0435	5 0	640		+828 +840								
					STD OBS	100			415 415	3498		2777 27 7 7	00	0423) (U4(+840								
					085	108			407	3498		779						+850								
					STO				413	349	7 2	2777	00	0446	3 0	684	4 14	+856								
					OBS	110			413	349		2777						856								
					OBS	11			404	349		2778 2779	0.0	0436	9 0	729		+854 +866								
					STD 085	120			398 398	349		2779	00	0430	9 0	125		+866								
					STO				383	349		2779	00	0441	6 0	773		+877								
					OBS	130		0	383	349	50 2	2779					14	877								
					STE			-	373	349		2779	0.0	0441	2 0	81		4889								
					OBS	140			373	3494		2779	0.0	04.37		9.		4889								
					STE				370	349		2780 2780	0.0	0437	0 0	86		4905 4905								
					085	15	00	0	370	349) [(180					1.	7700								

REFERENCE SHIP LATITU	25 100	GITUDE ES	MARSDEN	STATION TIA	1E YEAR	ORIGINATO		DEPTH MAN		WAVE ERVATIONS	WEA	CLOUG			NOOC	
CTRY ID. CODE .	1/10	1/10 E 50		MO DAY NR		CRUISE STAT		BOTTOM S'MPL		HGT FER SE	THER				TATION	
318016 EV 4657			149 67			 								_		1
1 316010 54 4657	N 04	144 W	149 07		ND I	A ID TEAAP	~	0179 02	21_21	3 3	X1	013	1	- 1	0022	ı
			COLOR	TRANS DIR.	SPEED MAT	J.	ET COD	d Ogy. Outro	ECIAL VATIONS							
			CODE	(m) LJIK.	FORCE (mb		JLB	DEPTHS OFFE	7 2110113							
			DT	SD 20	S10 17	9 028 0	28 7	14								
MESSENGR CAST	CARO	DEPTH (m)	t °c	5 %.	SIGMA-T	SPECIFIC VOLUME	₹ ∆ D		O2 ml/1	PO4-P	TOTAL-P	NO2-N	NO3-N	51 04-5		S
HR 1/10 NO.	TYPE				310	ANOMALY-X107	x 10 ³	. AEFOCITA	02 11127	7/10 - gu	yg - a1/1	yg - at/1	yg - 01/1	yg - ot/	pН	c
		1														\Box
	STO	0000	0120	3286	2634	0016953	0000									
053	OBS	0000	0120	32861	2634			14518								
	OBS STD	0005	0120 0115	32862 3286	2634 2634	0016000	001	14519								
000	OBS	0010	0115	32864	2634	0016900	001	7 14517 14517								
000	STD	0020	-0039	3287	2643	0016097	0033									
	085	0020	-0039	32869	2643		•	14449								
	STD	0030	-0031	3291	2645	0015842	0049	14455								
	OBS	0030	-0031	32906	2645			14455								
	STD	0050	-0101	3297	2653	0015087	0080									
	OBS OBS	0050 0065	-0101 -0126	32970 33006	2653 2657			14426								
	SID	0075	-0126	3317	2669	0013524	0116									
	OBS	0075	-0106	33170	2669	0013324	0-10	14431								
	OBS	0080	-0087	33180	2670			14441								
	OBS	0089	-0139	33180	2671			14418								
	STD	0100	-0136	3321	2674	0013102	0149									
	OBS STD	0100 0125	-0136 -0053	33211 3344	2674	0011670	0100	14421								
	OBS	0125	-0053	33438	2689 2689	0011649	0180	14467								
	STD	0150	0042	3358	2696	0011026	0209									
	OBS	0150	0042	33580	2696		Ų-Ū.	14517								
	OBS	0165	0042	33575	2696			14520								

	TITUDE LO	NGITUOE LE MA	RSOEN DU ARE	STATION TO	ME YEAR	ORIGINATO	DR'S	DEPTH	MAX. DEPTH OR	WAVE SERVATIONS	WEA- THER	CLOUD		51	NODC ATION	
CODE NO.	1/10	1/10 = 10	1°	MO OAY HE	1/10	NO. NU	WBER	BOTTOM	S'MPL'S OR	HGT PER SE	COOE	TTPE AMI		N	UMBER	
318016 EV 46	57 N 04	730 W 14	9 67	05 15 0	65 1967	9939	7	0220	02 21	3 2	X1	013			0023	
			WA	TER W	IND BAR	O. AIR TEMP.		NO.	SPECIAL	l' ' '	·		•	•		
			COLOR	TRANS. OIR.	SPEED MET OR (mb	ER ORY V	WET COD	OBS. DEPTHS	ORSERVATIONS							
			DT	50 20	512 18	3 028 (28 7	15								
MESSENGR CA		DEPTH (m)	T °C	5 %.	SIG MA-T	SPECIFIC VOLUME ANDMALY-1107	₹ △ D OYN. A x 10 ³	A		PO4-P pg = at/1	1-JATOT No - gu	NO2-N yg - at/l	NO3-N yg - oi/l	\$1 O4~51 1/to - gu	рН	S
																Π
, ,	STD	0000	0038	3284	2637	0016689	0000	144	480	' '		,				
065	OBS		0038	32837	2637				480							
	STD		0038	3284	2636	0016694	0017		482							
	OBS STD		0038	32836 3284	2636 2637	0016603	0033		482							
000	OBS		0029	32842	2637	0016602	0033		480 480							
***	STD		0095	3281	2640	0016337	0050		423							
	OBS	0030 -	0095	32811	2640				423							
	STO		0130	3299	2656	0014854	0081	144	413							
	085		0130	32989	2656			144	413							
	SID		0127	3313	2667	0013765	0117		420							
	OBS		0127	33130	2667				420							
	OBS OBS		0129 0107	33186 33190	2671 2671				422 433							
	STO	-	0123	3324	2675	0012957	0150		428							
	OBS		0123	33235	2675	0012771	0.00		428							
	STD		0040	3340	2685	0012033	0181		473							
	085	0125 -	0040	33395	2685			144	473							
	OBS		0012	33443	2688			144	488							
	OBS		0030	33419	2687				480							
	STD		0064	3366	2701	0010545	0210		528							
	OBS		0064	33660	2701				528							
	OBS OBS		0115 0276	33870	2715				558							
	003	0195	0210	34451	2749			146	540							

REFER	RENCE				F #	MARSOEN	STATION TH	WE	ORIGINATO		OEPTH	MAX. OEPTH		WAVE SERVATIONS	WEA-	CLOUG		1 .;	ATION	
CTRY	10.	COOE	LATITU	1	GITUOE E	SQUARE	MO DAY NE	YEAR	CRUISE STAT		BOTTOM	0.5	1	HGT PER SEA	CO.06	TYPE AM	8		UMBER	
CODE	NO.			1/10	1/10						0713	07	18	3 2	X1	0 3			0024	
31	8016	EV	4657	N U4	714 W	149 67 WAT		INC.	A IR TEAAP			1	1	12151	1 1	1 013	1	'	0024	
						COLOR		SPEED MET	0-	VIS.	NO. 085.	OBSERV	CIAL							
						COOF	(m) DIR.	FORCE (mb		ULB	OEPTHS									
						DT	SD 17	510 18	3 033 0	28 7	22									
	ſ	MESSENGE							SPECIFIC VOLUME	₹ △ o	501	UNO		PO ₄ -P	TOTAL-P	NO2-N	NO3-N	5104-51		s
		TIME	박 NO.	CARO TYPE	OEPTH (m)	1 ℃	5 %.	SIGMA-T	ANDMALY-X107	X 103	. VEL	OCITY	0 2 ml/l	μg = σ1/1	μ g - o t/l	μg = at/1	μg - α1/l	μg - α1/l	pН	č
	1	HR 1/10	-					-		_	+									П
			1		0000	0072	3284	2635	0016856	0000	14	496		1 1		1	'	1		, .
		07	c	STD OBS	0000	0072	32838	2635	0010030	0000		496								
		0 7	2	STD	0010	0072	3284	2635	0016847	0017		497								
				085	0010	0072	32839	2635			14	497								
				STD	0020	0073	3299	2647	0015731	0033		502								
		00	1	085	0020	0073	32986	2647				502								
				STD	0030	0086	3320	2663	0014171	0048	3 14	512								
				085	0030	0064P		2583P			1.6	522								
				OBS	0040	0098	33380 33425	2677 2681				515								
				085 510	0043 0050	0080	3369	2702	0010468	0073		524								
				085	0050	0091	33691	2702	0010400	001.		524								
				085	0056	0160	33743	2702			14	557								
				085	0064	0109	33759	2706			14	536								
				STD	0075	0132	3377	2706	0010136	0091		548								
				085	0075	0132	33769	2706				+548								
				STD	0100	0150	3390	2715	0009269	012		562								
				085	0100	0150	33900	2715		014		+562								
				STD	0125	0159	3407	2728	0008044	0144		572 572								
				085	0125 0140	0159 0159	34071 34150	2728 2734				576								
				OBS STD	0150	0208	3423	2737	0007202	016		600								
				085	0150	0208	34232	2737				+600								
				STD	0200	0291	3448	2750	0006046	019	7 14	4648								
				OBS	0200	0291	34482	2750			14	4648								
				085	0235	0322	34622	2758				4669								
				STD	0250	0352	3469	2761	0005121	022		4685								
				OBS	0250	0352	34687	2761				685								
				STD	0300	0433	3490	2769	0004419	024		4730 4730								
				OBS	0300	0433	34900 3491	2769 2772	0004278	029		+730 +741								
				51D 085	0400	0419 0419	34912	2772	3007278	029		4741								
				STD	0500	0419	3493	2775	0004062	033		4751								
				085	0500	0402	34929	2775	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-		4751								
				510	0600	0389	3493	2777	0003989	037		4762								
				085	0600	0389	34932	2777			14	4762								
				085	0695	0381	34934	2777			14	+775								

REFERENCE SHIP LATITUDE LON	GITUOE SOUARE	STATION TIME	ORIGINA YEAR COURSE SY		DEPTH DEPTH	WAVE OBSERVATIONS	WEA- THER	CLOUD		NOOC STATION
	. 02	MO OAY HR.1/10	CKUI3C 31	ATION UMBER	BOTTOM S'MPL		CORE	TYPE AMT		NUMBER
318016 EV 4657 N 046			967 994	1	1189 11	19 3 2	X1	0 3		0025
7 3 1 5 0 1 5 2 7 4 0 3 7 1 0 4 0	WAT		A ID TEAM	P. *C	1 110		XI	1 0 13 1	1	0025
	COLOR	TRANS. OIR. SPEED	METER DRY	WET CODE	085.	CIAL /ATIONS				
	CODE	im1 FORCE	(mbs) BULB	BULB	OEPIHS!					
	DT	SD 19 S15	196 039	033 7	25					
MESSENGR CAST CARD	DEPTH (m) T °C	s "/. SIGM/	A_T SPECIFIC VOLUM		DNDOS	O2 ml/1 PO4-P	TOTAL-P	NO2-N N	03-N SIO4-	-51 5
HR 1/10 NO. TYPE	Derrit bill	3.31	ANOMALY-E10	x 10 ³	VELOCITY	μg + σ1/t	μg - e1/l		- at/1 yg - a	
STD	0000 0056	3282 263	4 0016916	0000	14488		·	,		
089 OBS	0000 0056	32819 263			14488					
STD 085	0010 0050 0010 0050	3299 264 32990 264		0016						
002 085	0010 0030	33046 264			14490 14527					
STD	0020 0104	3310 265		0032						
085	0020 0104	33103 265			14517					
085	0029 0040	33232 266			14491					
SID	0030 0059	3323 266		0046						
08S 08S	0030 0059 0043 0050	33230 266 33450 268			14500 14501					
SID	0050 0086	3348 268		0072						
085	0050 0086	33475 268			14519					
OBS	0059 0031	33609 269			14498					
ST0	0075 0110	3380 271		0099						
085	0075 0110	33804 271			14539					
STD 085	0100 0167 0100 0167	3406 272 34061 272		0121						
510	0125 0205	34061 272 3427 274		0140	14572 14595					
085	0125 0205	34270 274		0140	14595					
STD	0150 0265	3443 274		0157						
OBS	0150 0265	34431 274			14628					
STO	0200 0328	3464 275		0185						
085 STD	0200 0328 0250 0380	34638 275 3475 276		0210	14666					
085	0250 0380	34753 276		0210	14698 14698					
SID	0300 0416	3485 276		0234						
OBS	0300 0416	34847 276			14723					
510	0400 0432	3490 276		0280						
085	0400 0432	34897 276		- 3	14747					
ST0 085	0500 0423 0500 0423	3491 277 34905 277		0325	14759 14759					
STO	0600 0423	3493 277		0369						
085	0600 0423	34929 277		0-07	14776					
STD	0700 0409	3493 277	4 0004327	0413						
085	0700 0409	34930 277			14787					
SID	0800 0396	3493 277		0456						
08S STO	0800 0396 0900 0390	34929 277 3493 277		0400	14798					
OBS	0900 0390	34932 277		0499	14812 14812					
SID	1000 0381	3493 277		0542						
085	1000 0381	34932 277			14825					
STO	1100 0370	3494 277		0584						
OBS	1100 0370	34940 277			14837					
085	1149 0369	34942 277	9		14845					

																							_			
ERENCE	SHIP				- # E	MAI	SDEN JARE		ION TIM			ORIGI			DEPTH	MAX, OEPTH		WAVE SERVATIO	214	WEA-	CLC	OES			NODC	
ID.	CODE	LATITU		LONGIT	NOCE TOUR						AR (NO.	STAT		OT NOTTO8	0.5	1	HGT PER		THER	TYPE				TATION	
-			1/10			10*	1	MO DAY HI									1	-	3EA		1					
1801	6 EV	4657	7 N	0464	15 W	149				03 1967			9942 AIR TEMP. °C		0732	07	19	3 2		X 1	0	3 .			0026	
								COLOR TRANS.		SPEED METE		0-		ET CODE	NO. 085.		CIAL									
							COOF	lm)	DIR.	OR FORCE	(mbs)	80,58		JLB CODE	OEPTHS	ORZEKA	ZHOITAY									
							DT	SD 19		S15 20		0 050 0		44 7	20											
	MESSEN							30	17.	217				ΣΔD				-								Т
	TIME	of NO.	CAI		DEPTH (m)		r *c	,c 2 .		SIGMA.	-T	SPECIFIC VOLUME ANOMALY-X107		X 103		OCITY	0 2 ml/	PO4-	- 1	07AL—P g = at/l	NO2-		NO3-N yg - ol/l	\$1 O4-\$1 yg = 01/	ρН	1
	HR 1/1	0	-	_					-		-			X 10-	-			-				\rightarrow			-	+
				- 1							ŀ				١.			-			l	ļ			1	- 1
				TD	0000		175	328		2631		00172	33	0000		542										
	0		085				0175			2631				0016	14542											
				TO					21	2665		00139	82	0016		499										
			08	0010					2665		0012282		0029		474											
	0.0)]	08	10	0020		0000		390	2683		00122	02	0029		474										
	00	, 1		10	0030		0016	339		2695		00111	50	0040		485										
			08		0030		0016		548	2695		00	2 0	00.0		485										
				TD	0050	(0067	33	72	2706		00101	23	0062	14	514										
			08	S	0050	(0067	33	718	2706	5				14	514										
			08		0066		0316P			2769					1/502											
				TD	0075		195	34		2739		00074	27	0084		582										
			08s STD		0075		0195		34185 27					-1-1		582										
					0100		0262			2746		00063	48	0101		618										
				08S 01			262		400			2225/	7,	0117		618										
			085		0125		0375 0375	346	629	2754		000567		0116		674										
							0451	34		2757		00053	84	0130		712										
			-						776			00072	0 4	0.50		712										
			08		0170		0451 0389	_	690	2757						688										
				TD	0200		373	34		2761	l	00051	14	0156	14	686										
			08		0200	-	373	34	710	2761	l				14	686										
			S	TD	0250	-	0980	34	77	2764	4	00048	76	0181	14	702										
			0.8	S	0250		390		771	2764	4					702										
			S	TD	0300		0425	341		276		00046	38	0205		727										
			08		0300		0425		859	276						727										
			0.8	_	0365		0472	_	936	2768						758										
				TD	0400		0460	34		2769		00045	31	0251		759										
			08		0400		0460	34	940	2769		00063	0.3	0295		759										
			08	TD	0500		0420 0420	_	913	2772		00043	02	0295		758										
			-	10	0600		0420	34		2774		00042	63	0338		770										
			08		0600		0408		924	2774		000-72	-	0-50		770										
				TD	0700		3397	349		2776		00041	88	0381		782										
			0.8		0700		0397		930	2776						782										
			08		0705		0397		930	2776						783										

REFERENCE	SHIP			E E	MARSOEN	STATION TO	IME	EAR		2°9OTA		OEPTH	MAX. OEPTN	089	WAVE SERVATIONS	WEA-	CLONO			NOOC	
CTRY ID.	CODE	LATITU	1/10	ONGITUOE 1/10		MO DAY H		EAR		STATION NUMBER		BOTTOM	OF S'MPL'S		HGT PER SE	THER	TYPE AM	1		STATION NUMBER	
318016	EV	4657		04631 W				967		43		0330	03	20	2 2	X1	0 3	<u>'</u>	-	2027	
1 210010	4 - 4	4051	MIC	740JI WI	WA		VINO		1 410 70	MP. °C					12121	\1	1 013	f	!	0027	l
					COLOR	TRANS, OIR	SPEED	BARO- METER	ORY	WET	COOI	NO. 085.	OBSERVA	TAL ATIONS							
					COOE	tm) Unc	FORCE	(mbs)	BULB	BULB		DEPTHS									
					DT	50 20	515	200	051	045	7	34									
	MESSENGR TIME	CAST	CARO	DEPTH (m)	1 %	s */	SIGMA	,	SPECIFIC VOL	IME S	Δ O.	sou	INO	O 2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-	si	S
	HR 1/10	NO.	TYPE	DEFIN ON			JIG/HIZ	·	ANOMALY-3	107	x 10 ³	, AETO	CITY	02 11101	yg = 01/1	µg = o1/l	ا/lo - وبر	μg = at/l	µg - 01,	/I pH	č
			ST	0000	0198	3312	264	9	001549	4 0	000	14	556						•		
	116)	085	0000	0198	33120	264						556								
			OBS	0005	0189	33270	266						555								
	000		STC OBS	0010	0282 0282	3349 33490	267 267		001333	37 0	014		599 599								
	000	,	085	0015	0360	33810	269						638								
			STO		0398	3383	268		00118	6 0	027		655								
			OBS	0020	0398	33825	268						655								
			085	0025	0403	33815	268	6				14	658								
			ST		0395	3381	268		001194	8 0	039		655								
			OBS	0030	0395	33810	268						655								
			OBS	0034 0040	0380 0528	33790 34010	268 268						649 715								
			OBS OBS	0046	0438	34110	270						680								
			510		0460	3414	270		001014	3 0	061		690								
			OBS	0050	0460	34140	270	6					690								
			OBS	0055	0440	34210	271						684								
			OBS	0057	0312	33930	270						626								
			OBS	0065	0492	34310	271		00075		0.00		708								
			STC OBS	0075	0340	3433 34330	273 273		00075	. 8 0	083		646 646								
			085	0085	0400	34490	274						676								
			085	0095	0445	34510	273						696								
			ST		0440	3455	274	0	000694	5 0	101	14	696								
			OBS	0100	0440	34545	274						696								
			OBS	0105	0431	34545	274						693								
			OBS ST	0107	0444	34585 3458	274 274	-	0006B	14 0	118		699 704								
			OBS	0125	0449	34580	274		50000	, 4 0	* 10		704								
			OBS	0135	0413	34600	274						691								
			OBS	0140	0418	34640	275						694								
			ST		0420	3469	275		00057	36 0	134		697								
			085	0150	0420	34685	275						697								
			OBS	0153 0175	0443 0457	34702 34778	275 275						708								
			OBS OBS	0175	0457	34770	275						718 722								
			085	0195	0465	34820	275						725								
			STO		0468	3481	275		00053	71 0	162		727								
			085	0200	0468	34810	275	В					727								
			OBS	0205	0445	34840	276						719								
			085	0211	0465	34850	276						728								
			OBS	0225	0459	34830	276	_	00067	D 0	107		728 724								
			STI OBS	0250	0438 0438	3486 34859	276 276		00047	. d U	187		724 724								
			ST	_	0440	3489	276		00045	71 0	210		733								
			OBS	0300	0440	34890	276						733								
					_																

CE	SHIP			LONGIT	CTR CTR	MARS		STATION	TIME	YEAR		ORIGINA	TOR'S ATION	OEP TO	0 0	MAX. DEPTH OF	OBS	WAVE SERVATIONS		CODES		5	NODC	
ID.	CODE	LATITU	1/10	LONGITU	NDCT 1/10	10°			40 OAY HR.1/10		CRUISE NO.		I M BER	BOTT		MPL'S	DIR.	HGT PER S	COD	E TYPE AM			UMBER	
	-					149		05 15	133	1	7	994	4	02	92	03	20	2 2	x1	03			0028	
016	EV	4657	N	04610	WI I	147	66 WAT		WIND			AIR TEM	P. °C	NO	D.	SPEC				•				
							COLOR	TRANS. O	SPI	EO ME	TER	DRY	WET CO	λl on	S	BSERVA								
						ļ	CODE	(m)	FO	RCE (m	bs)	BULB	BULB	- 017										
						l	DT	50 2	0 50	06 2	00 0	90	080	3	1			Ļ					1	\neg
	MESSENGE	SSENGR CAST CARD		$\overline{}$				/	Π.		SPECIFI	C VOLUM	E SA	D.	SOUN		O 2 ml/	PO4-P	TOTAL-		NO3-N	SI O4-S		Š
	TIME	T NO.	TYPE		PTH (m)	'	*C	s */.	. ,	IGMA-T	ANOA	AALY-X10	x 1	3 '	VELOC	CITY		yg + 01/1	μg - et/	1 µg - al/l	µg - al/l	μg = al/	1	С
	HR 1/10	-				_			\top															
		1	٠,		000		541	3376	٠,	2667	00	13823	. 000	0	147	10		,						
	13	2	S T 08S	_	000		541	3376		2667					147	10								
	10	_	ST	,	010	0	500	3378		2673	00	1323	00		146									
			OBS		010	0	500	3378		2673					146									
	0.0	0	089		0011		491	3378	_	2674					146									
			OBS		0014		559	3410		2691					147									
			OBS	-	0017		558 564	3410		2692 2694	0.0	1127	1 00		147									
			ST 085	. –	0020 0020		564	3413		2694	00	11			147									
			085		0025		582	3420		2697					147	37								
			51	-	0030		554	3421		2701	00	1063	6 00	37	147									
			OBS	5 (0030)554	3421		2701					147									
			OBS	_	0033		546	3421		2702					147									
			085	~			548	34258 34260		2705 2705					147									
			089	085 00		0548 0548		3426	-	2705					147									
				_	0050		532	3431		2711	00	0965	9 00	57	147	722								
			089				532	3431		2711					147	722								
			OBS	-	0055		1490	34373		2721					147									
			OB:		0070	0479		34432		2727					14705									
					0075		1468	344		2730	0.0	0792	2 00	19	147									
			OBS	_	0075		0468	3449		2730 2737	0.0	0727	4 00	O R	146									
					0100		0432 0432	344		2737	00	0121	7 00	, 0	146									
			OB:	-	0118		0418	345		2745					146	590								
					0125		0434	346		2745	0.0	0653	2 01	15	146	-								
			0В:	5	0125		0434	345		2745					146									
			OB:		0133		0435	346		2750					147									
			OB:		0141		0512	347 347		2749 2747					147									
			QB:	-	0145 0150		0503	346		2750	0.0	0610	4 01	31	147									
			0B:	, -	0150		0458	346		2750	30				147									
			08	~	0157		0467	347		2753					147									
			ОВ	_	0170	- (0467	347	-	2753					147									
			08	-	0175		0461	347		2752						719								
			ов	-	0182		0431	347		2756	0.0	0622	0 01	59	14	708 711								
				STD 020			0431	347 347		2760 2760	Ü	0522	7 01	,,		711								
				OBS 02			0431	348		2762						720								
					0225		0437	348		2765	0.0	0477	7 01	84	14	723								
				STD 025			0437			2765						723								
			ОВ	-	0275		0434	348	77	2767					14	726								

RENCE																											
ID. CODE LATITUDE LONGITUDE					MAR		TATE	ION THE	WE	YEAR	0.7144	ORIGIN	_		OEP.		Tital	WA	VE ATION!	w	EA-	Crono			NODC		
NO.	0001		1/10		'1/10 " Z	10*	10	MO DAY HE		R.1/10		CRUIS NO.		MUN		BOTT		1	_	PER S	- 0		TYPE AM	1	S	TATION	
8016	N EV I	472	1 N	046	10 W	149	149 76 C		05 15 16		196	7				035	7 0	3 25	2	3	X	1	0 3			0029	
							COLOR	I		SPEED MET					VIS.	1 000	NO. SPEC								'	0029	1
							CODE	(m)	DIR.	FORCE	(m)		BULB	BU		DEPT		RVATIONS									
	MESSENGR						DT	SD	23	502	1	93 (056	0	50 7	28	_		<u></u>								
		CAST NO.	TYPE	0	DEPTH (m)	T	*C	2	*/	\$IG N	A-T		MALY-XI		∑ ∆ D OYN. M		OUND	02 ml/	ni/L PO4-P		TOTAL		NO2-N	NO ₃ -N	\$1.04-\$1	рН	5
	HK 1710	STD 0 168 OBS 0 STD 0 OBS 0		_											X 10 ³	+	LOCILI	-	ν,	9 - 01/1	10 = QU	71	1\fo - gu	νg - o1/l	/וס - קע	pri	c
	1			D ,	0000	0	309	332	3324 2		50	00	1544	6	0000	. 1	4606		-]					
	16			0000	-	309	332	3240 26		2650		00		0000		4606											
							156 156	335		268		00	1184	6	0014		4545										
				0020					2688 2690		0011663		3	0025		4545 4669											
	000)	OBS		0025	025 04		33920 3387 33870		2690 2692		0011448			0023		4678										
			ST OBS				390							8	3 0037		4654										
			OBS		0037	0390 0186		337		269							4654 4565										
			ST		0050				3421		2708		999	5	0058		4706										
			08s		0050				4210 270 4055 271		-						4706										
			085		0067		0351		34030		2710 2709						4648										
			5 T I		0075	0499		3428		2713		000	9542	2	0083		4712										
			08s		0075	0499 0410		34280 34257		2713 2721							4712										
			OBS		0087		340	341									4676 4646										
			OBS		0090					2742P						1	+040										
			STI OBS	_	0100		26	341		2728		000	8093	3	0105		+599										
			OBS		0103		12	341		272							+599										
			OBS				79	342		- 1 - 2 - 2							+594 +626										
			OBS ST		0118		260	342		2737							618										
			0B5				85	3431 34310		2737		0007239)	0124		631										
			OBS		0135		25	345		2737 2743							+631 +695										
			STI OBS		0150		75	345	_	2744		000	6591		0141		676										
			OBS		0150		75 85	345 344		2744 2748							676										
			OBS		0170	_	25	345		275							638										
			OBS		0175		96	346		275							691										
			OBS STD		0187		36	347		275		0.00	F / = =				711										
			085		0200			347		275		000	5438		0171		715										
			STD		0250	04	41	348	6	276		000	4761		0197		725										
			OBS STD		0250 0300	04			34859		2765					14	725										
			085		0300			3481		276		000	4554		0220		730										
			OBS		0320	04		3489		276	-						730 730										
			OBS	OBS 0340			23	3489			0						733										

REFERENCE		= M	ARSDEN	STATION TIM	E	ORIGINATO	R*S	DEPTH	MAX. DEPTH		WAVE	WEA-	CLOUD		1	ATION	
CTRY ID. CODE LATITU	DE LON	GITUDE NO.	OUARE	(GMT)	YEAR	CRUISE STAT		BOTTOM	OF	1	RVATIONS HGT PER SEA	THER	TYPE AMI	1		UMBER	
CODE NO.	1/10	1/10 = 1	D* 1° A	AO DAY HR.	1/10	NO. NUM	BEK		S'MPL'S								
318016 EV 4743	N 04	605 W 1	49 76 0	05 15 1	90 1967			0662	06	26	2 3	l xo	013		1	00301	
			WATE	R WI	BAK		V15.	NO.	SPEC	CIAL							
			COLOR	TRANS. DIR.	OR Imbe		JLB COD	DEPTHS	OBSERV	ATIONS							
			-		FORCE		44 7	22									
			DT	SD 23	508 19	3 056 0	_	_	L		T T						75
MESSENGE CAST	CARD	DEPTH (m)	T ℃	s °/	SIGMA-T	SPECIFIC VOLUME	Z △ D DYN. M	SO!	OCITY	O ₂ m1/1	PO4-P pg - o1/1	TOTAL=P µg = 01/I	NO2-N ug - at/l	NO3-N 1/10-gu	\$1 O4-Si yg - a1/l	ρН	C
HR 1/10 NO.	TYPE					ANDANALITANA	x 10 ³	1 100	00111		70.00	79		79	-		+
							1								1	l	11
1	STD	0000	0261	3312	2644	0015940	0000) 14	584								
190	QBS	0000	0261	33123	2644				584								
.,,	QBS	0005	0262	33123	2644				585								
001	085	0007	0201	33312	2664				561								
	STO	0010	0260	3410	2722	0008562	0012		598								
	OBS	0010	0260	34098	2722	7 7 7 7 7	000		598								
	STO	0020	0273	3429	2736	0007223	0020) 14	608								
	OBS	0020		3349P	2678P 2745	0006424	002	7 14	617								
	STD	0030	0285 0285	3441 34410	2745	0000424	002		617								
	OBS	0030	0285	34461	2748				624								
	085 085	0043	0310	34411	2743				629								
	QBS	0047	0301	34526	2753				+628								
	STD	0050	0317	3447	2747	0006250	0040	0 14	634								
	085	0050	0317	34472	2747			14	634								
	OBS	0065	0305	34478	2749				+632								
	STD	0075	0302	3450	2751	0005908	005	-	4633								
	085	0075	0302	34502	2751				+633								
	STD	0100	0300	3458	2757	0005305	006		4637								
	OBS	0100	0300	34582	2757				4637 4652								
	STD	0125	0325	3461	2757	0005317	008	_	4652								
	OBS_	0125	0325	34613	2757	0005086	009		4665								
	STD	0150	0343	3467	2760	0000000	009	-	4665								
	OBS	0150	0343	34669 3471	2760 2763	0004904	012		4677								
	STD	0200 0200	0351	3471	2763	3004704	0-2		4677								
	085 STD	0250	0371	3473	2762	0004981	014		4694								
	085	0250	0371	34731	2762			1 -	4694								
	STD	0300	0392	3480	2766	0004741	016		4712								
	OBS	0300	0392	34798	2766				4712								
	STD	0400	0412	3486	2769	0004566	021		4738								
	OBS	0400	0412	34863	2769		031		4738								
	STD	0500	0428	3490	2770	0004562	026	_	4761 4761								
	OBS	0500	0428	34901	2770	0004415	030		4775								
	STD	0600	0420	3492	2772 2772	0004415	050		4775								
	OBS	0600	0420	34922					4783								
	085	0650	0420	34922	2772			-	-105								

REFERENCE SHIP LATITU	IDE LO	NGITUDE E	MARSOEN SQUARE	STATION T			2'SOTAN		OEPTH	MAX. OEPTN	Ī	WAVE	WEA-	CLOUC			NORC	
CODE NO. CODE	1/10	NGITUDE BB	10" 1"	MO DAY H	YEAR	CRUISE NO.	NOITAT2		BOTTOM	OF S'MPL'S		HGT PER SE	THER	TYPE AM		2	NODC TATION TUMBER	
318016 EV 480:	3 N 04	603 W	149 86		209 196		947		0880	09		2 2	XO	0 3			0031	
			COLOR		SPEED BA		EMP. °C	vis.	NO. OBS.	SPEC	IAL		,		'	1	0051	
			CODE	TRANS. DIR.	OR (m)		WET	CODE	DEPTHS	OBSERVA	SHOILY							
			DT	SD 23	S15 1	93 056	044	7	28									
MESSENGR CAST TIME OF NO. HR 1/10	TYPE	DEPTH (m)	т °С	s */	SIGMA-T	SPECIFIC VOL	UME DY	△ D N. M 10 ³	VELO		O2 m1/l	PO4-P µg = a1/1	TOTAL-P	NO ₂ -N µg - at/l	NO3-N yg - al/l	51 O4-Si pg - al/1	pN	200
	_																	+
209	STD OBS	0000	0409 0409	3398 33976	2699 2699	001080	09 00	000										, .
-07	STD	0010	0367	3395	2701	001061	11 00	011	146									
	085	0010	0367	33950	2701				146									
001	STD 085	0020 0020	0264 0264	3417 34174	2728	000802	25 00	20	146									
•	085	0021	0252	34169	2728 2729				146									
	STD	0030	0269	3427	2735	000734	7 00	28	146									
	08S 0BS	0030 0037	0269	34270	2735				146									
	085	0046	0265 0313	34370 34400	2744 2742				146									
	STD	0050	0293	3443	2746	000632	5 00	041	146									
	08S 08S	0050 0057	0293 0289	34434	2746				146	524								
	STD	0075	0289	34470 3453	2749 2751	000591	3 00	57	146 146									
	085	0075	0326	34530	2751	000371		,,,	146									
	STD OBS	0100 0100	0321	3459	2756	000543	5 00	71	146	46								
	STD	0125	0321 0344	34590 3465	2756 2759	000520	3 00	84	146 146									
	085	0125	0344	34652	2759	000720	J 00	0-7	146									
	STD	0150	0356	3469	2760	000509	1 00	97	146	70								
	OBS STD	0150 0200	0356 0387	34685 3478	2760 2765	000671	6 A1	2.2	146	-								
	OBS	0200	0387	34782	2765	000471	0 01	22	146									
	STD	0250	0413	3483	2766	000465	3 01	45	147									
	08S ST0	0250 0300	0413 0399	34833 3483	2766	000440	1		147									
	OBS	0300	0399	34826	2767 2767	000460	9 01	68	147									
	085	0325	0415	34858	2768				147									
	08\$ 08\$	0368 0372	0404	34872	2770				147	29								
	STD	0400	041 4 0410	34875 3486	2769 2769	000457	4 02	14	147									
	085	0400	0410	34859	2769	000497	7 02	14	147									
	085	0450	0394	34846	2769				147	38								
	STD 08S	0500 0500	0406 0406	3486 34860	2769 2769	000462	0 02	60	147									
	085	0530	0390	34852	2770				147									
	STD	0600	0418	3491	2772	000448	9 03	06	147									
	08\$ 08\$	0600 0630	0418 0423	34909	2772				147									
	STD	0700	0423	34909 3491	2771 2772	000450	6 03	5.1	147									
	085	0700	0411	34909	2772	500450	0 05	71	147									
	STD	0800	0400	3491	2774	000445	0 03	95	148	00								
	085 STD	0800 0900	0400 0392	34912 3491	2774 2774	000449	3 04	<i>(</i> , 0	148									
	085	0900	0392	34906	2774	000449	3 04	40	148									
									- 0									

REFE	RENCE		Ι —		-=	MARSDEN	STATION TIM	E	ORIGINA		OEPTH	MAX.		WAVE SERVATIONS	WEA-	CLOUD		- ,	NODC	
CTRY	10.	COOE	LATITU	DE L	ONGITUOE	SOUARE	(GMT)	YEAR	CRUISE S	TATION	BOTTOM	S'MPL		HGT PER SEA	0000	TYPE AMI	r		NUMBER	
CODE	NO.		<u> </u>	1/10	1/10 =		MO DAY NR.				1170	11	23	22	ΧO	0 3		1	0032	
31	8016	EV	4824	N C	14600 W			30 1967	A IR TEA					12121	1 40	, 0.3				
						WAT		SPEED ALEX	10-		NO.	OBSER	CIAL							
						COLOR	TRANS. OIR.	FORCE (mb		BULB	OBS. DEPTHS	-		}						
						DT	SD 23	515 20	07 033	022 7	21									
							301251		SPECIFIC VOLU	ME & A C	so	UNO	0 -1/	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-5		Š
		MESSEN	CAST	CARD	OEPTH (m)	7 %	s */	SIGMA-T	ANOMALY-XI	OYN. /	VEL	OCITY	O 2 m1/	yg - □1/1	μg = et/l	µg = at/1	µg - al/l	yg - al/	/1	С
		HR 1/1	0		_															
								2402	001138	6 000	1 1 14	626		' '		•				
				ST		0337	3381 33810	2692 2692	001136	6 000		626								
		2	30	OBS	0000	0337 0338	33845	2695				628								
				085 STI	0008 0010	0420	3449	2738	000706	2 000		672								
		0	02	085	0010	0420	34490	2738				672								
		J	- 2	ST		0425	3461	2747	000625	8 001		677								
				OBS	0020	0425	34605	2747	000500			+677 +678								
				ST		0422	3465	2751	000588	4 002		+678								
				OBS	0030	0422	34652 3465	2751 2752	000580	3 003		4677								
				ST		0412	34652	2752	00000	,, ,,		+677								
				08S ST		0377	3466	2756	000541	18 004		4667								
				OBS		0377	34660	2756				+667								
				ST		0357	3470	2761	000496	8 006		4663								
				085		0357	34697	2761	000449	99 007	_	4663 4670								
				ST		0363	3477 34770	2766 2766	000443	99 001		4670								
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				ST		0379	3483	2769	000429	97 010		4690								
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				OBS	0500	0408	34904		00013	70 04		4753 4769								
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STD 1200 0366 3494 2779 0004222 0522 14853 OBS 1200 0366 34936 2779 14853 STD 1300 0362 3495 2781 0004154 0564 14868 OBS 1300 0362 34950 2781 14868 STD 1400 0357 3495 2781 0004173 0606 14883 OBS 1400 0357 34950 2781 14883 STD 1500 0351 3495 2782 0004156 0647 14897											000418	5 04	00	-									
OBS 1200 0366 34936 2779 14853 STD 1300 0362 3495 2781 0004154 0564 14868 OBS 1300 0362 34950 2781 14868 STD 1400 0357 3495 2781 0004173 0606 14883 OBS 1400 0357 34950 2781 14883 STD 1500 0351 3495 2782 0004156 0647 14897								3494	2779) (000422	2 05	22										
OBS 1300 0362 34950 2781 14868 STD 1400 0357 3495 2781 0004173 0606 14883 OBS 1400 0357 34950 2781 14883 STD 1500 0351 3495 2782 0004156 0647 14897														148	53								
STD 1400 0357 3495 2781 0004173 0606 14883 OBS 1400 0357 34950 2781 14883 STD 1500 0351 3495 2782 0004156 0647 14897											0004154	+ 05	64										
OBS 1400 0357 34950 2781 14883 STD 1500 0351 3495 2782 0004156 0647 14897											000417	3 06	06										
STD 1500 0351 3495 2782 0004156 0647 14897				OBS	140	0	0357				J J J T I I	, 00	50										
005 1500 0351 34953 2782 14897									2782		0004156	06	47										
				085	150	U	0351	34953	2782					148	97								

85555	RENCE		Γ		_=	MARSDEN	STATION TI	ME	0	RIGINAT	OR*S	DEPTH	MAX. DEPTH	200	WAVE	WEA-	CLOUD		1	ODC	
CTRY	ID.	CODE	LATITU	DE L(DAGITUDE E	SOUARE	(GMT)	YEAR	CRUISE		TION	BOTTOA	, OF		ERVATIONS	THER	TYPE AM		N	UMBER	
CODE	NO.	CODE	•	1/10	* '1/10 " ×	10° 1°	MO DAY H	R.1/10	NO.	NUI	ABER	10000	, Z,Wbr.		HGT PER SE			1	-		
31	8016	EV	4740	N O	47225W	149 77	05 17 1	138 1967		9950		0564	05	24	9 2	X 2	0 3	1		0034	
1 3 4	001	4 - 4				WA	TER V	BAR BAR	0- A	IR TEMP.	VI	NO.	SPE	CIAL							
						coros	TRANS. DIR.	SPEED MET			VET CO		OBCCDV	A TION S							
						CODE	(M)	FORCE				+-	+ -								
						DT	SD 24	530 0	78 0	28 (28 6	26									
		MESSEN	GR CAST	CARD		1 °C	s */	SIGMA-T		VOLUME	₹ ∆ DYN.	SC SC	DNUC	02 m1/L	PO4-P	TOTAL-P		NO3-N	SI O4SI	pН	ç
			GR CAST	TYPE	DEPTH (m)	1 ' '	,	\$10ma=1	ANOMA	LY-X107	X 10	AEI	LOCITY		ا/۱۵ - ۵۷	pg = a1/1	//se - gu	1/10 - gu	µg - a1/1		c
		HR 1/	10																		
				_		0150	0.24.7	2(00	001	2569	000	0 14	4541		1						
				STD	0000	0153 0153	3347 33465	2680 2680	001	2 7 0 9	000		4541								
		1	38	OBS	0000	0166	33555	2686					4549								
				0BS ST0		0145	3367	2697	001	0961	001		4542								
		0	01	OBS	0010	0145	33670	2697					4542								
		0	- 1	STO		0113	3372	2703	001	0379	002		4530								
				OBS	0020	0113	33720	2703					4530								
				OBS	0027	0110		2707					4530								
				STO		0119		2712	000	9506	003		4536								
				OBS	0030	0119		2712					4536								
				OBS	0035	0136		2712					4544 4552								
				OBS	0040	0149 0162		2719 2723	000	8476	005		4561								
				STO	0050	0162		2723	000	0 1 1 0	00.		4561								
				OBS	0069	0276		2732				1	4617								
				OBS	0070	0250		2734				1	4606								
				ST		0259		2736	000	7290	00	0 1	4611								
				OBS	0083	0261	34317	2740					4614								
				OBS	0092	0246	34360	2744					4609								
				ST	0100	0261	3436	2743	000	6634	008		4617								
				OBS	0100	0261		2743					4617								
				OBS	0120	0283					0.1		4631								
				ST		0283		2749		6131	010		4632								
				ST		0285		2752	000	5801	01		4638								
				OBS	0150	0285							4667								
				OBS ST	0170	0342		2759	000	5265	014		4679								
				085	0200	0358							4679								
				STI		0410		2773	000	4045	01	69 1	4713								
				OBS	0250	0410							4713								
				OBS	0260	0431		2770					4723								
				STI	0300	0424	3491	2771	000	4246	01		4727								
				OBS	0300	0424							4727								
				OBS	0350	0410					0.1		4729								
				ST		0399		2774	000)4014	02		4733								
				OBS	0400	0399							4737								
				OBS	0450	0388		2776	0.00	3960	02		4744								
				ST		0386			000	13700	02		4744								
				OBS	0500	0386							4752								
				OBS	0540	038) 3472(, 2110					,								

CTRY ID.	SHIP	LATITU	IOF .	LONGITUDE	MAR		STATIO	T NC	IM E				DRIGIN	ATOR'S		DEPTH	MAX. DEPTH		WA	VE		WEA-	CLOUD	Т		NODC	1
CODE NO.	CODE		1/10	1/10	10°	1°	MO D			YEA	'R C	RUISE NO.		TATION		BOTTOM	0.5	1 00		A TION		THER	CODES			STATION	
31801	6 EV	4740	N	047255W	149	77			147	19	6.7				_	0.27/			1	PER S	SEA		TYPE AM		\rightarrow	TTO MIBER	-
					1 - 17	WA			VIND		BARO-	7	99		\vdash	0274 NO.	03	74	10	12	1	X 2	013	1	-	0035	, l
						COLOR	TRANS.	DIR.	SPEE) A	AETER		ORY	WET	COD:	0.00		CIAL 'ATIONS									
						DT	-	2.	FORC	-	(mbs)		nra	BULB	-												
	MESSENGR	Τ.			7	UI	SD	24	530)	085	10	28	028		21	Щ,		<u> </u>		_						
	TIME	OF NO.	CAR TYPI		1	°C	2 •	/··	SIG	MA-	T 5	PECIFIC	VOLU	y,E ₹	A. 0.	SOL	DOLITY	O2 ml/l		04-1		74 L-P	NO2-N	NO3-N	SI 04-		Š
	HR 1/10	+			+-		+		+-		+				103	1			וע	g - o1/i	9.0	- 01/1	h8 - a1/	μg - at/l	νg + αl.	1 1	č
	1	1	l S1	D 0000	1	195	335	2	26	81	- 1	001	262				1								l		
	14	7	OBS			195	335			81		001	243	9 ()	000		560 560										
			S1		0	193	335	2		81		001	242	B 00	012		561										
			OBS			193	335			81							561										
	00	1	ST OBS		_	170 170	335			84	(001	217	1 00	25		553										
			OBS			158	336			91							553 548										
			OBS			191	338	80		10							567										
			OBS			178	339			17							563										
			ST OBS			180	339			18	(000	893(0.00	35		565										
			085			180 218	339			18							565										
			OBS	0047		191	340			26						145	574										
			ST		-	197	341			28	(3000	8000	0.0)52	145											
			OBS			197 246	341			28			710-				577										
			OBS			246	3428			38 38	(300	710	00	71	146											
			OBS	0800		241	3429			39						146 146											
			08s			268	3434	-		41						146	17										
			ST			260 271	3433		27	41 46	_	2006	200			146											
			OBS	0100		271	3440		27		(,,,,,	356	00	88	146											
			ST		02	96	3449			50	С	0005	980	01	03	146											
			OBS	0125		96	3449		27							146											
			OBS ST	0135 D 0150		139	3452	-	27 2 7				27.	0.1	• •	146											
			OBS	0150		39	3462		27		U	0005	371	0.1	18	146											
			ST	0200		71	3471		27		0	0005	094	01	44	146											
			OBS	0200		71	3471		27							146											
			OBS	0250		31	3490		27		0	0004	383	01	67	147											
			OBS	0275		31	3490		27 27							147											
							2.470		21	10						147	26										

REFER	ENCE					MARSDEN	STATION THE	ME	ORIGIN	ATOR'S		EPTH DEPT		WAVE SERVATIONS	WEA-	CODES			NODC	
CTRY	ID.	SNIP	LATITUI	DE LO	NGITUDE LE	SQUARE			CRUISE S	TATION		TO OF		HGT PER SE	CODE	TYPE AM	-	N	UMBER	
CODE	NO.	CODE	· _	1/10	1/10 2	10° 1°	MO DAY HE	2,1/10	-		+-								0036	
21	8016	EV	4738	N O	47255W	149 77	05 17 1	51 1967		52	04	+05 0	4 74	10121	l X2	013	1	1	0036	
1 21	0010	-1 - 1		,, , -		WAT	ER W	IND BAR	O- AIR TE		VIS. 1 A		ECIAL							
						COLOR	TRANS. DIR.	OR Imb		WET C	ODEDE	PTHS OBSER	EVATIONS							
						CODE		TORCE		-		25		1						
						DT	SD 24	530 08	5 033		- '-	25		<u>' </u>					T	
		MESSENG	RCAST	CARD		7.70	s ./	SIGMA-T	SPECIFIC VOLU		. M.	SOUND	02 m1/	PO4-P	TOTAL-7 ug - ot/l	NO2-N pg - at/1	NO3-N	SI D4-Si yg - at/l	рН	c
		TIME	OT NO.	TYPE	DEPTN (m)	' `	1	310	ANOMALY-X	X	103	VELOCITY) pg - at/1	pg - 0171	P	pg - 0.71	-	-	+1
		NR 1/1	0		+												1			11
		1			1	0201	3348	2678	001275	5 00	oo '	14562	•							
				STD	0000	0201	33484	2678	0012.			14562								
		15	1	08S STD		0201	3348	2678	001275	8 00	13	14564								
				085	0010	0201	33484	2678				14564								
				STD	-	0198	3378	2702	001049	6 00	24	14568								
		0.0	01	085	0020	0198	33780	2702				14568								
				085	0025	0195	34000	2720				14571								
				085	0026	0205	34071	2725			٠,	14576								
				STD	0030	0210	3409	2726	00082	48 00	34	14580								
				085	0030	0210	34089	2726				14580								
				085	0037	0208	34112	2728				14574								
				085	0040	0192	34117 3421	2729 2735	00074	18 00	49	14585								
				STD		0220	3421		00014	10 00	7,	14589								
				085	0050 0051	0220	34210					14594								
				08s	0060	0231	34222					14595	j							
				085	0066	0264	34290					14612								
				085	0072	0263	34300					14612								
				ST		0245	3429	2739	00070	24 00	67	14605								
				085	0075	0245	34290	2739				1460								
				085	0090	0248	34335	2742				1460								
				ST	0100	0279	3441	2746	00064	17 00	84	1462								
				085	0100	0279					200	1462								
				STI		0282	3451	2753	00057	06 00	99	1463								
				085	0125	0282						1464								
				085	0140	0308						1465								
				085	0145	0334		2753 2755	00055	28 0	113	1466								
				ST		0335			00000	20 0		1466								
				085	0150	0335 0331						1466								
				085		0377		2762	00049	30 0	140	1468	8							
				51 085		0377						1468	8							
				ST		0404	-	2770	00042	88 0	163	1471								
				085		0404						1471								
				ST		0406		2772	00041	04 0	184	1471								
				085		0406	3490				-	1471								
				ST		0399	3493	2775	00039	62 0	224	1473								
				085		0399	3492	2775				1473	3							

CTRY ID. CODE LATIN	UDE LO	NGITUDE JOCTE	MARSDEN SOUARE	STATION TI	ME YEAR	ORIGIN		DEPTH	MAX. DEPTH	0.000	WAVE	WEA				NODC	1
CODE NO. CODE	1/10	1/10 0 =	10" 1"	MO CAY H			TATION IUMBER	BOTTON	0.5		RVATIONS	77725			1	STATION	
318016 EV 473	8 N 04	7225W :			157 1967	99	53	0600	0.5		0 2	X2	0 3	_			
			WAT		SPEED MET	O- AIR TE	AP. °C	NO.	SPEC		01-1	1 12	1 013		1	0037	1
			COLOR	TRANS. DIR.	OR (mb		BULB CO	DEPTHS	OBSERVA	TIONS							
			DT	SD 24	530 08	5 033	033 6	28									
MESSENGR CAST		OEPTH (m)	7 °C	s ·4.	SIGMA-T	SPECIFIC VOLU	ME & C	501	UND .		PO4~P	TOTAL-P	110				T,
HR 1/10 NO.	TYPE				31GMX-1	ANOMALY-XI	17 ΟΥ: Λ X 10 ³	VELC	DCITY	D2 ml/I	1/10 - gu	101AL-P	NO2-N ug - ot/l	NO3-N	-40 12 10 - 94		ç
	1			1													+
157	STD OBS	0000	0149	3336	2672	001334	0000		538					1		'	1 1
157	085	0005	0149 0148	33360 33356	2672 2672				538								
	STD	0010	0124	3335	2673	001326	5 0013		538 528								
001	085	0010	0124	33349	2673	001-20	001.		528								
	08s 08s	0016 0018	0026 0045	33330 33449	2677				484								
	STD	0020	0045	33449	2685 2686	001200	2 0026		495 491								
	085	0020	0035	33449	2686	001200	. 0020		491								
	08S STD	0025	0026	33471	2688			14	488								
	085	0030	0080	3363 33629	2698 2698	001087	0037		515								
	085	0035	0099	33648	2698				515 525								
	085	0040	0084	33672	2701				519								
	08S STD	0045	0106 0110	33749 3381	2706			14									
	OBS	0050	0110	33811	2711 2711	000967	0058	149									
	STO	0075	0195	3412	2729	0007919	0080										
	085 085	0075	0195	34120	2729			145									
	085	0082 0089	0239 0289	34150 34230	2728 2730			146									
	STD	0100	0249	3427	2737	0007206	0099	146									
	085	0100	0249	34272	2737		00,,	146									
	085 085	0105 0110	0231	34275	2739			146									
	STD	0125	0231 0261	34300 3438	2741 2745	0006505	0116	146									
	085	0125	0261	34380	2745	000000	0110	146									
	STD 08s	0150	0289	3447	2749	0006085	0132										
	08S	0150 0175	0289 0319	34470 34568	2749 2754			146									
	STD	0200	0390	3473	2760	0005137	0160	146 146									
	OBS	0200	0390	34730	2760		0-00	146									
	OBS STD	0225 0250	0425	34810	2763			147									
	085	0250	0419	3480 34800	2763 2763	0004964	0185	147									
	085	0265	0401	34840	2768			147 147									
	STD	0300	0438	3491	2770	0004399	0208	147									
	OBS STD	0300	0438 0413	34910	2770	000130		147									
	085	0400	0413	3491 34909	2772 2772	0004234	0252	147									
	STD	0500	0396	3491	2774	0004129	0493	147									
	085	0500	0396	34911	2774			147									

REFERENCE CTEY IO. CODE LATITUCE NO. CODE .	N 04	NGITUOE . 11/10 914 W 914 W	149 49 WAT	TRANS. DIR.	YE AR	O- AIR TEMP. ER DRY W BULB BE	TION STREET	DEPTH MAX. TO CEPTH OF SMPL'S DR. 0059 00 24 NO. OBS. OBSERVATIONS	2 3	WEA- THER CODE	CLOUD CODES	1	51 N	NOOC FATION UMBER	
TIME OF NO.	TYPE	DEPTH (m)	ī °C	s */	SIGMA-T	SPECIFIC VOLUME	₹ △ D OYN. M. X 10 ³	SOUNO VELOCITY 02 ml/	PO4-P ug - ot/1	TOTAL-P pg - 01/1	NO2-N ug = 01/1	NO ₃ -N µg - al/l	\$1 O4-\$1 µg - 01/[рΗ	500
184	STD OBS OBS STO	0000 0000 0001	0567 0567 0531	3259 32590 32612	2571 2571 2577	0022887	0000	14706 14706 14691		1					
000	08S 08S STD 08S	0010 0010 0015 0020 0020	0490 0490 0275 0240 0240	3262 32620 32600 3290 32902	2582 2582 2602 2628 2628	0021835	0022	14676 14676 14585 14575							
	08S 08S STD 0BS 08S	0026 0028 0030 0030 0032	0055 0091 0076 0076 0119	33029 33048 3311 33110 33248	2651 2651 2656 2656 2656	0014802	0058	14575 14495 14512 14506 14506 14528							
	STD OBS	0050	0146 0146	3327 33269	2665 2665	0014019	0087	14543 14543							

REFE	RENCE	T - T			_ a	MARSDEN	STATION TH		DRIGINATO	R'S	DEPTH DEPTH	0.051	WAVE ERVATIONS	WEA-	CDDES			NODC	
CTRY	ID.	CODE	LATITU	DE L	NGITUDE NO	SOUARE	(GMT)	YEAR	CRUISE STAT		BOTTOM S'MPL'S		HGT PER SEA	THER	TYPE AM			UMBER	
CODE	ND.	CDOL		1/10	1/10	10° 1° A	AO DAY HE	1,1/10	NO. NUM	BEK	13 MILL 3					1			
31	8016	EV	4442	2 N O	4900 W			98 1967	9955		0384 03	24	1 2	x 2	0 3			0039	
						WATE		SPEED BAR		VIS.	NO. SPEC								
						CDLOR	TRANS. DIR.	OR (mbe		JLB CODE	DEPTHS DESERVA	LIDNS							
						-	00 17		5 078 0	72 6	24								
						DT	SO 17	\$10 31					20 0		NO ₂ -N	ND3-N	SI D4-Si		s
		MESSENG	CAST ND.	CARD	DEPTH (m)	1 %	s */	SIGMA-T	SPECIFIC VOLUME	∑ ∆ D DYN. M X 10 ³	SOUND	D ₂ ml/l	PO4-P pg + 61/1	TOTAL-P	ug - at/I	μg = al/l	yg = at/1	pH	c
		HR 1/1	1	1176						X 10-	-		-					-	+
													ļ			l	1	l	1 1
		'		STD	0000	0350	3285	2615	0018746	0000									
		19	8	OBS	0000	0350	32850	2615			14618								
				085	0003	0272	32825	2620	0017/00	0018	14585 14542								
				STD		0171 0171	3283 32833	2628 2628	0017489	0016	14542								
		0.0	0	OBS	0010	0035	3290	2642	0016204	0035									
				STD OBS	0020	0035	32898	2642	001020+	0000	14483								
				STO		-0062	3301	2655	0014964	0051	14442								
				OBS	0030	-0062	33005	2655			14442								
				OBS	0038	-0052	33039	2657			14448								
				STD	0050	-0052	3304	2657	0014725	0080									
				OBS	0050	-0052	33040	2657			14450								
				OBS	0057	-0053	33065	2659			14451 14444								
				085	0064	-0072	33102	2663	0014080	0116									
				STO		-0078 -0078	3311 33110	2664 2664	0014080	0116	14443								
				OBS	0075	-0076	3314	2666	0013831	0151									
				ST(0100	-0084	33138	2666	0012031	0-2-	14445								
				STI	-	-0083	3315	2667	0013715	0186	14449								
				OBS	0125	-0083	33152	2667			14449								
				ST	0150	-0083	3318	2669	0013503	0220									
				085	0150	-0083	33178	2669			14454								
				OBS	0163	-0072	33260	2676			14462 14468								
				OBS	0187	-0069	33244	2674			14492								
				OBS	0196	~ 0025	33430	2687	0011831	0283									
				STI		-0019 -0019	3343 33431	2687 2687	0011031	020.	14495								
				OBS ST	0200	0150	3390	2715	0009296	0336									
				085	0250	0150	33901	2715	300,2,0		14587								
				085	0267	0280	34230	2731			14651								
				085	0272	02688		27199											
				085	0281	0385P		2739P											
				085	0292	0318F	34139			- 0									
				ST		0338	3440	2740	0007144	037									
				OBS	0300	0338	34404				14684								
				OBS	0325	0348	34491	2746			14693								

REFERENCE SHIP		- E	MARSDEN	STATION TI		DRIGINA	TDR'S		MAX.	WAVE	WEA	CLOUD			11000	
CODE NO. CODE LATITE	1/10	AGITUDE POPUL	SQUARE	MO DAY H	YEAR		ATION	TO	DF	BSERVATIONS	THER	CODES			NODC	
318016 EV 444		853 W			04 1967		- I	3	S'MPL'S DIR			TYPE AMI	-	-	NUMBER	
	- / ,		WA		IND BAR	A (0. 25 44	P. °C	0814	07 24	1 2	X2	013	I	- 1	0040	
			COLOR	TRANS. DIR.	SPEED MET	ER DRY	WET CODE	000	SPECIAL SERVATION:	s						
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STD 0600 0448 3493 2770 0004682 0450 14787 085 0600 0448 34930 2770 14787 STD 0700 0435 3493 2771 0004632 0496 14798 085 0700 0435 3493 2771 14798 STD 0800 0430 3496 2774 0004488 0542 14813 085 0800 0430 34965 2774 14813 STD 0900 0426 3496 2775 0004503 0587 14828 085 0900 0426 3496 2775 0004503 0587 14828 STD 1000 0414 3496 2776 0004454 0631 14839 085 1000 0414 3496 2776 0004461 0676 14839 STD 1100 0395 3494 2777 0004461 0676 14848 STD 1200 0396 3495 2777 0004491 0721 14865 O85 1300 0387 3495 2778 0004491 0721 14865 STD 1300 0387 3495 2778 0004491 0721 14865 STD 1300 0387 3495 2778 0004491 0721 14865 STD 1400 0382 3495 2779 0004491 0810 14893 O85 1400 0382 3495 2779 0004491 0810 14893 STD 1500 0380 3495 2779 0004491 0810 14893 STD 1500 0380 3495 2779 0004551 0856 14909											0000	.05	, 0	. 02										
STD 0700 0435 3493 2771 0004632 0496 14798 085 0700 0435 34930 2771 14798 STO 0800 0430 3496 2774 0004488 0542 14813 085 0800 0430 34955 2774 14813 STO 0900 0426 3496 2775 0004503 0587 14828 085 0900 0426 34960 2775 14828 085 0900 0414 3496 2775 000454 0631 14829 STO 1000 0414 3496 2776 0004454 0631 14839 085 1000 0395 3494 2777 0004461 0676 14848 085 1100 0395 3494 2777 0004461 0676 14848 STD 1200 0396 34950 2777 14865 085 1200 0396 34950 2777 14865 OBS 1300 0387 3495 2778 0004467 0766 14878 STD 1300 0387 3495 2778 0004467 0766 14878 STD 1400 0382 3495 2779 0004491 0810 14893 OBS 1400 0382 3495 2779 0004551 0856 14909					ST	0600	0448	3493	27	70	0004	68	2 0	450										
OBS 0700 0435 34930 2771 14798 STO 0800 0430 3496 2774 0004488 0542 14813 OBS 0800 0430 34965 2774 14813 STD 0900 0426 3496 2775 0004503 0587 14828 OBS 0900 0426 34960 2775 14828 STO 1000 0414 3496 2776 0004454 0631 14839 OBS 1000 0414 34960 2776 14839 OBS 1100 0395 3494 2777 0004461 0676 14848 OBS 1100 0395 3494 2777 0004461 0676 14848 STO 1200 0396 3495 2777 0004491 0721 14865 OBS 1200 0396 3495 2777 14865 OBS 1300 0387 3495 2778 0004467 0766 14878 OBS 1300 0387 3495 2778 0004491 071 14865 OBS 1300 0387 3495 2778 0004491 0761 14878 OBS 1300 0387 3495 2778 0004491 0761 14878 OBS 1400 0382 3495 2779 0004491 0810 14893 OBS 1400 0382 3495 2779 0004551 0856 14909											0004	163	2 0	496										
STO 0800 0430 3496 2774 0004488 0542 14813 0BS 0800 0430 34955 2774 14813 STD 0900 0426 3496 2775 0004503 0587 14828 0BS 0900 0426 34960 2775 14828 14839 STO 1000 0414 34960 2776 0004454 0631 14839 0BS 1100 0395 3494 2777 0004461 0676 14848 0BS 1100 0395 34940 2777 14848 STD 1200 0396 3495 2777 0004491 0721 14865 0BS 1200 0396 34950 2777 0004467 0766 14878 0BS 1300 0387 34950 2778 14878 0BS 1300 0387 34950 2779 0004491 0810 14893 0BS 1400 0382 34950 2779 0004491 0810 14893											000		_		-									
\$\begin{array}{c ccccccccccccccccccccccccccccccccccc						0 0800	0430				0004	+48	8 0	542										
0BS 0900 0426 34960 2775 14828 STO 1000 0414 3496 2776 0004454 0631 14839 0BS 1000 0414 34960 2776 STO 1100 0395 3494 2777 0004461 0676 14848 0BS 1100 0395 34940 2777 14848 STO 1200 0396 3495 2777 0004491 0721 14865 0BS 1200 0396 34950 2777 14865 STO 1300 0387 3495 2778 0004467 0766 14878 0BS 1300 0387 3495 2778 14878 STO 1400 0382 3495 2779 0004491 0810 14893 0BS 1400 0382 3495 2779 0004551 0856 14909											0004	450	3 0	58										
STO 1000 0414 34960 2776 0004454 0631 14839 085 1000 0414 34960 2776 14839 STO 1100 0395 3494 2777 0004461 0676 14848 085 1100 0395 34940 2777 14848 STO 1200 0396 3495 2777 0004491 0721 14865 085 1200 0396 34950 2777 14865 STO 1300 0387 34950 2778 14865 085 1300 0387 34950 2778 14878 STO 1400 0382 3495 2779 0004491 0810 14893 085 1400 0382 34950 2779 14893 STO 1500 0380 3495 2779 0004551 0856 14909														- 0	1	4828								
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OBS 1300 0387 34950 2778 14878 STD 1400 0382 3495 2779 0004491 0810 14893 OBS 1400 0382 34950 2779 14893 STD 1500 0380 3495 2779 0004551 0856 14909											000	446	7 (76										
STD 1400 0382 3495 2779 0004491 0810 14893 OBS 1400 0382 34950 2779 14893 STD 1500 0380 3495 2779 0004551 0856 14909											505		,		1	4878								
STD 1500 0380 3495 2779 0004551 0856 14909					51	D 1400	0382	3495	27	79	000	449	1 (081										
310 1200 0200 2.112											000	455	1 (185										
											000	,,,	. (, -)										

IO.	COOE	LATITUE	1£ LO	NGITUDE NGITUDE	MARSOEN SOUARE	STATION (GMT	1	YEAR C	RUISE	2°AOTAT	4	DEPTH TO BOTTOM	OEPTH OF S'MPL	1 085	WAVE ERVATIONS HGT PER SI		CLOUD		\$	NOOC TATION NUMBER	
18016	ΕV	4435	5N 04	835 W				1967		58	\rightarrow	2377	15		1 2	X2	0 3			0042	
					WA1		WING	BARO-	AIR TE	MP. ℃	V15,	NO.	192	ECIAL	121-1	1 7/2		1	'	0042	
					COLOR	TRANS. OIR	FORCE	METER (mbs)	ORY BULB	W ET BULB	CODE	DEPTHS	OBSER	ZNOITAV							
				,	DT	50 19	507	315	072	06	7 6	40									
	MESSENGR TIME 0 HR 1/10	CAST NO.	CARO TYPE	OEPTH (m)	T °C	s */	SIGN	A-T S	PECIFIC VOLU	ME 07	E △ 0 NN. M. X 10 ³	VEFO:		O 2 ml/l	PO4-P P9 - 01/1	TOTAL-P yg - a1/1	NO2-N yg - a1/l	NO3-N yg - ot/l	SI O4-Si pg - 01/I	рН	200
																					\dagger
	227	,	STD OBS	0000	0353 0353	3303 3303(26:		001741	4 (0000										
			STD	0010	0098	3294	26		001622	2 (0017	146									
	003		OBS	0010	0098	32940						145									
	003		OBS	0015 0020	0036 0182	32900) 26° 26°		001318	7 (0032	144									
			OBS	0020	0182	33410		73				145									
			OBS	0025	0086 0195	33232 3345	2 26°		001297	в (0045	145									
			085	0030	0195	33450			001271	0 (1047	145 145									
			085	0038	0237	33490						145	84								
			STD 08S	0050 0050	-0022 -0022	3338 33382	268 268		001223	6 (070	144 144									
			STD	0075	0166	3368	269	76	001108	0 0	099	145									
			085 085	0075 0083	0166 0140	33675 33762						145									
			085	0095	0400	34195						145 146									
			STD	0100	0350	3419	272		000871	5 (124	146	53								
			OBS	0110	0350 0400	34190						146 146									
			STD	0125	0355	3433	273	32	000774	4 (144	146									
			085 085	0125 0138	0355 0343	34328						146									
			STD	0150	0388	3447	274		000700	6 0	163	146									
			085 085	0150 0175	0388	34472						146									
			STD	0200	0374 0413	34518 3466	274 275		000588	4 0	195	146 147									
			085	0200	0413	34662		3				147	02								
			OBS OBS	0211 0235	0500 0410	34870 34710						147 147									
			STD	0250	0468	3485	276		000512	8 0	222	147									
			OBS OBS	0250 0280	0468 0570	34850 34985						147									
			STD	0300	0563	3499	276 276		000529	2 0	249	147									
			085	0300	0563	34987	_	1				147									
			0BS 0BS	0320 0338	0525 0533	34920						147 147									
			OBS	0350	0470	34873						147									
			085 085	0360 0382	0493 0460	34945 34910	276					147									
			STD	0400	0470	34910	276 276		000457	3 Ω	298	147									
			085	0400	0470	34950	276	9				147	63								
			STD OBS	0500 0500	0436 0436	3494 34940	277 277		000436	3 0	343	147									
			STD	0600	0430	3494	277		000439	7 0	386	147									
			OBS STD	0600 0700	0430 0420	34940 3494	277		200/21		4.20	147	79								
			085	0700	0420	34942	277 277		000436	5 0	430	147									
			STD	0800	0397	3493	277	6 (000428	2 0	473	147	99								
			OBS STD	0800 0900	0397 0391	34930 3494	277 277		000423		5.1.	147									
			085	0900	0391	34940			00423	0	516	148									
			STD OBS	1000	0389 0389	3494	277		000428	2 0	558	148.	29								
			STD	1100	0396	34942 3495	277 277		00439	2 0	602	148									
			085	1100	0396	34951	277	7				148	49								
			STD OBS	1200 1200	0384 0384	3495 34951	277 277		00433	+ 0	645	148									
			STD	1300	0377	3495	277	9 (000433	3 0	689	148	74								
			OBS STD	1300 1400	0377 0373	34951 3495	277 278		100/36		722	148									
			085	1400	0373	34951			00436	0	732	1488									
			STD	1500	0370	3495	278	0 0	004414	+ 0	776	1490	05								
			085	1500	0370	34951	278	U				1490	05								

RENCE SHIP LATITUDE LONGITUDE SU SQUARE IGMTI YEAR CRILISE STATION TO	
	AX. WAVE OBSERVATIONS OF CODES ON NUMBER
NO. 1/10 1/10 2 10° 1° MO OAY HR,1/10 NO. NUMBER 0500 35M	APL'S DIR. HGT PER SEA COOL TYPE AMT
WATER WIND AIR TEMP. C NO	15 23 1 3 x0 0 3 0043
COLOR TRANS. DIR. SPEED METER DRY WET CODE DEPTHS OBS	SPECIAL SERVATIONS
DT SD 22 506 322 083 072 7 35	
MESSENGR CAST CARD STAND SOUND	
TIME O'NO. TYPE OFFTH (m) T C S SIGMA-T ANOMALY-X197 DIN. M. X 103 VELOCITY	Y O2 mi/1 pg - o1/1
STD 0000 0396 3307 2628 0017544 0000 1464	1
004 DBS 0000 0396 33065 2628 1464	1
OBS 0005 0260 33010 2635 1458 STD 0010 0290 3315 2644 0015973 0017 1459	
003 085 0010 0290 33150 2644 1459	
OBS 0020 0404 33398 2653 1465	2
085 0025 0332 33490 2667 1462 STD 0030 0430 3364 2670 0013572 0047 1466	
OBS 0030 0430 33640 2670 1466	8
08S 0041 0344 33590 2674 1463 STD 0050 0375 3369 2679 0012713 0073 1464	
08S 0050 0375 33685 2679 1464	
DBS 0070 0115 33510 2686 1453 STD 0075 0131 3358 2691 0011564 0103 1454	
OBS 0075 0131 33580 2691 1454	
085 0094 0201 33788 2702 1458	2
STD 0100 0245 3394 2711 0009680 0130 1460 085 0100 0245 33940 2711 1460	
STD 0125 0300 3414 2722 0008652 0153 1463	35
OBS 0125 0300 34140 2722 1463 08S 0145 0364 34330 2731 1466	
STD 0150 0334 3425 2728 0008151 0174 1465	
OBS 0150 0334 34250 2728 1465	
OBS 0175 0383 34438 2738 1468	
STD 0200 0393 3457 2747 0006367 0410 1465 085 0200 0393 34570 2747 1465	
OBS 0220 0417 34645 2751 1470	
OBS 0250 0385 34651 2755 1469	99
STD 0300 0419 3481 2763 0004977 0267 1472 085 0300 0419 34805 2763 1472	
OBS 0300 0419 34805 2763 1477 STD 0400 0454 3494 2770 0004500 0314 1475	
OBS 0400 0454 34935 2770 1479	
OBS 0500 0462 34970 2772 1477	76
OBS 0573 0424 34951 2774 1477 STD 0600 0429 3496 2774 0004237 0403 1477	
OBS 0600 0429 34960 2774 147	79
STO 0700 0427 3497 2776 0004241 0445 1479	
STD 0800 0413 3497 2777 0004174 0487 1480	06
085 0800 0413 34970 2777 1480 STD 0900 0396 3497 2779 0004082 0528 1480	
OBS 0900 0396 34968 2779 148	15
STD 1000 0391 3497 2779 0004100 0569 148	
OBS 1000 0391 34970 2779 148 STD 1100 0382 3496 2779 0004154 0610 1489	
OBS 1100 0382 34960 2779 148	
STD 1200 0378 3496 2780 0004193 0652 1488 085 1200 0378 34960 2780 1488	
STO 1300 0375 3496 2780 0004242 0694 148	73
085 1300 0375 34960 2780 148 STD 1400 0373 3496 2780 0004302 0737 148	
OBS 1400 0373 34960 2780 148	89
STD 1500 0370 3497 2781 0004290 0780 149 08s 1500 0370 34968 2781 149	

REFERENCE SNIP LATITUDE LON	GITUDE SOUARE	STATION TIME	YEAR		INATOR'S	\Box	DEPTN	MAX. DEPTN	WAVE OBSERVATIONS	WEA- THER	CLOUD			NODC	
CODE NO. CODE . 1/10	· 1/10 2 10. 1.	MO DAY HR.1/1		NO.	NUMBER		MOTTOR	OF S'MPL'S	DIR. NGT PER SEA	CODE	TYPE AMT		N	UMBER	
318016 EV 4430 N 048	800 W 149 48	05 21 019			960	\perp	3621	15	19 1 4	l xol	0 3			0044	
	COLOR	SPE SPE	ED BAKO-	•	TEMP. °C	VIS.	NO.	SPEC OBSERVA	AL						
	CODE	TRANS. DIR. OFFO	RCE (mbs)		BULB		DEPTHS	OBSEKVA	IIONS						
	101	SD 22 S1	10 335	133			41								_
MESSENGR CAST CARO	DEPTN (m) T °C	\$ */ 5		SPECIFIC VO	LUME 0	ΔD YN. M. X 10 ³	. VELC				NO2-N ug - at/i		\$1 O4~\$i yg = al/l	ρН	5
HR 1/10						X 10"		-		-	20 - 0.7 ·	pg = 0(/1)		-11
STO	0000 1316	3520 2	2653	00150	86 0	000	150	017	1 1	- 1	ı	1			11
019 085	0000 1316	35201 2	2653				15	017							
STD 085	0010 1311 0010 1311		2654 2654	00150	17 0	015		017 017							
STD	0020 1330	3529 2	657	00147	59 0	030	150	026							
003 08S STD	0020 1330 0030 1346		657 665	00140	73 0	044		026 034							
085	0030 1346	35430 2	665				150	034							
STD 085	0050 1256 0050 1256		1682 1682	00124	70 0	071		007 007							
085	0058 1268	35468 2	684				15	013							
STD OBS	0075 1245 0075 1245		1685 1685	00123	37 0	102		800 800							
STD	0100 1210	3537 2	687	00121	46 0	133	149	999							
085 ST 0	0100 1210 0125 1151		687 691	00118	68 N	163		999 982							
OBS	0125 1151	35265 2	691	00110	00 0	100		982							
08s STD	0132 1210 0150 1134		697 700	00110	37 0	191	150	006							
OBS	0150 1134		700	00110	J1 0	- 7 1		981							
085 STD	0162 1156 0200 0938		704	00007	77 ^	21.3		992							
085	0200 0938		714	00097	// 0	243		915 915							
085	0208 0900	35040 2	717				149	902							
OBS STD	0215 0925 0250 0686		721 732	00080	21 0	288	149	9 1 4							
OBS	0250 0686	34825 2	732				148	324							
08s 08s	0267 0677 0295 0723		732 740				148	323 348							
STD	0300 0705	3495 2	739	00074	34 0	326	148								
08S 08S	0300 0705 0305 0683		739 740				148								
OBS	0326 0764	35150 2	747				148								
08s 08s	0360 0632 0387 0693		751 757				148								
STD	0400 0633	3504 2	756	00059	48 0	393	148								
085 085	0400 0633 0425 0641		756 761				148								
085	0480 0455	34861 2	764				147	769							
085 STD	0489 0475 0500 0455		766 767	00048	80 0	447	147								
085	0500 0455	34900 2	767	00070	00 0	741	147	773							
08S 08S	0523 0491 0540 0456		767 768				147								
STD	0600 0453	3494 2		00046	74 0	495	147								
085 085	0600 0453 0640 0450		770 771				147								
STD	0700 0495	3506 2	775	00044	39 0	541	147								
08S STD	0700 0495 0800 0450		775 778 (00061	03 0	504	148								
OBS	0800 0450		778	00041	92 0	584	148								
STD OBS	0900 0436			00041	46 0	626	148	33							
STD	0900 0436 1000 0415		779 780	00040	97 0	667	148 148								
085	1000 0415	35010 2	780				148	341							
ST0 085	1100 0400 1100 0400		780 (780	00041	0 4	708	148								
510	1200 0392	3499 2	781 (00041	46 0	750	148	64							
085 STD	1200 0392 1300 0384		781 781 (000418	87 0	791	148								
085	1300 0384	34983 2	781				148	77							
ST 0 08S	1400 0373 1400 0373		782 (782	00041	41 0	833	148								
STD	1500 0373	3498 2	782 (00042	26 0	875	149	06							
085	1500 0373	34982 2	782				149	06							

REFERENCE	SHIP	LATITU	DF LC	DINGITUDE SOUTION	MARSDEN	ST	ATION T	IME	YEAR	CRUISE	ORIGINA	ATOR'S	=	DEPTH	MAX. DEPTH	0	W A V BSERVA	E TIONS	WEA-	CLOUG		5	NODC	
CTRY IO.	CODE	•	1/10	1/10	10° 1°		CAY H	- 1		NO.		UMBER		BOTTOM	OF S'MPL"		HGT		CODE	TYPE A M			UMBER	
31801	6 EV	4428	N O	4747 W	149 4	7 05		032	1967		990		\sqcup	3585	15	20	լե	4	ΧO	013			0045	
					COL	OR TRA	\rightarrow	SPEEC	BARO	R	ORY TEN	WET	VIS	NO. OBS.	SPE	CIAL	s							
					co	\rightarrow	_	SPEEC OR FORC			ULB	BULB	\perp	Utrins			-							
		1			D	S	D 20	509	33		28	111	7	34	L			-						
	MESSENGR TIME HR 1/10	CAST	CARG TYPE	DEPTH (m)	1 10		5 */	SIG	MA-T	SPECIFIC	ALT-XIG	ye o	∆ D rN, M (10 ³	. VELO	CITY	O 2 ml		4-7 - et/1	FOTAL-P ug - qt/l	NO2-N µg - at/l	NO3-N ug = at/l	Si O4-5: µg = st/l	рН	ç
	HK 1/10	_				+						_		1			\top							\dagger
	1	'	STD	0000	115		461		40	001	638	6 0	000		953		'	,						
	03	2	OBS STD	0000	115 119		4612 484		40	001	556	3 N	016		953 974									
			OBS	0010	119	3	4839	26	49					14	974									
	00	3	STD OBS	0020 0020	126 126		514 5135		58 58	001	469	0 0	031		003									
	00	,	STD	0030	125	3	536	26	79	001	275	9 0	0 4 5	15	001									
			085 085	0334 0346	068 077		4790 5082		729 740						838 877									
			STD	0400	063		494		48	000	669	6 0	434		829									
			OBS OBS	0400 0454	063 051		4940 4815		48 53						829 789									
			085	0465	044		4750		57						759									
			STD	0500	047		491		65	000	505	3 0	493		781									
			085 085	0500 0540	047 056		4910 5040		'65 '65						781 827									
			STD	0600	054	2 3	504	27	68	000	503	9 0	543	14	827									
			OBS STD	0600 0700	054 044		5038 494		68 71	000	468	5 0	592		827 802									
			OBS	0030	125	3	5358	26	79					15	001									
			STD OBS	0050 0050	123 123		537 5372		83	001	239	2 0	070		999 999									
			STD	0075	124		540		83	001	243	9 0	101		007									
			OBS STD	0075 0100	124 125		5400 545		83	001	245		132		007 017									
			OBS	0100	125		5445		84	001	243	0 0	132		017									
			STD	0125	127		551		85	001	241	8 0	163		028									
			OBS OBS	0125 0135	127 128		5509 5515		85						028									
			STD	0150	126	3	548	26	86	001	238	7 0	194	15	026									
			08s 08s	0150 0160	126 119		5478 5318		86						026									
			OBS	0195	119	5 3	5378	26	91					15	010									
			STD 085	0200 0200	115 115		527 5268		91	001	201	3 0	255		994 994									
			STD	0250	081		481		113	000	987	8 0	310		872									
			085	0250	081		4812		13						872									
			OBS STD	0260 0300	089 081		5081 499		722 726	000	879	5 0	357		907 885									
			085	0300	081		4985	27	26					14	885									
			085 085	0310 0700	085 044		5109 4939		30 71						901 802									
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REFERENCE CTRY ID.	SHIP	LATITU	DE LO	NGITUDE NGCT#	MARSDEN SOUARE	STATION 1	IME	YEAR	CRUISE	RIGINA			DEPTH	MAX. DEPTH	08	WAVE SERVATION		EA-	CLOUD			NDDC	
CTRY ID.	CDDE	٠	1/10	· '1/10 0 = =	10° 1°	MO DAY			ND.		UMBER		BOTTOM	OF S'MPL'S		HGT PER		DE	TYPE AMI			NUMBE	
31801	6 EV	4423	5N 04	+727 W	149 47		051 WIND	1967		996 IR TEM			3895	15	23	1 2	X	0	0/3			004	6
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					CODE	Im)	FORC	—		-	BULB	-	DEPTHS										
	MESSENGR	CLEY	CARD		DT	SD 22	512	31	T .		106	_	27					_			1		
	HR 1/10	NO.	TYPE	DEPTH (m)	T *C	s */	SIG	MA-T	SPECIFIC	LY-X10	AE D	△ 0 rN, M, k 10 ³	. VELC	CITY	D2 ml/	PO4-P µg + o1/1	TOTAL 0 = 04		NO2-N µg - 01/l	NO ₃ -N μg + οl/I	SI D ₄ -		н С
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			OBS	0030	1339	35545		75	0013	,07.	0	043		033									
			STD	0050	1299	3551		80	0012	2665	0	069	15	023									
			OBS STD	0050 0075	1299 1213	35505 3533	26	80	0012	266		100		023 996									
			OBS	0075	1213	35334			0012		, ,	100		996									
			STD	0100	1245	3544	26		0012	2234	0	131		012									
			OBS STD	0100 0125	1245 1219	35442 3537	26 26		0012	341	0	162		012									
			OBS	0125	1219	35370	26		0012		. 0	102		006									
			STD	0150	1179	3530	26		0012	188	0	193		996									
			OBS STD	0150 0200	1179 1121	35299 3523	26 26		0011	800		253		996 983									
			OBS	0200	1121	35225	26		0011	.000	. 0	255		983									
			OBS	0215	1138	35354	27						14	993									
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			STD	0300	0908	3513	27		0009	134	0	357		921									
			OBS	0300	0908	35130	27							921									
			STD OBS	0400 0400	0692 0692	3498 34976	27 27		0007	221	. 0	439		853 853									
			STD	0500	0588	3500	27	59	0005	807	0	504	14										
			OBS OBS	0500 0586	0588 0542	34997 35020	27 27							328									
			STD	0600	0490	3494	27		0005	113	0.5	559	148	324									
			OBS	0600	0490	34940	27						148										
			OBS STD	0630 0700	0477 0462	34942 3497	27		0006	(03			148										
			OBS	0700	0462	34967	27 27		0004	003	0.0	806	148										
			STD	0800	0442	3497	27	74	0004	530	0.6	554	148	318									
			OBS STD	0800 0900	0442 0413	34969 3494	27 27		0004	463	0.4	500	148										
			OBS	0900	0413	34944	27		0004	403	U	699	148										
			STD	1000	0411	3496	27		0004	395	0.	743	148										
			OBS STD	1000 1100	0411	34963	27		0004	271		707	148										
			OBS	1100	0402	3496 34964	27 27		0004	3/1	0	787	148										
			STD	1200	0384	3495	27	79	0004	326	0.6	330	148										
			OBS STD	1200 1300	0384 0385	34952 3496	27 27		0004	367	0.0	27,	148										
			OBS	1300	0385	34962	27		0004	554	0.6	374	148										
			STD	1400	0379	3496	27	80	0004	364	09	17	148	392									
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COORDINATE CATU C		3180	16 EV	4419	95N 0	4706 W				1967	<u> </u>				4078	15	27	1 2	X4	013			0047	
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OBS 0548 0617 35190 2770 14850 STD 0600 0550 3508 2770 0004831 0505 14831 OBS 0640 0469 34987 2772 14803 STD 0700 0449 3498 2774 0004444 0552 14804 OBS 0700 0449 34978 2774 0004444 0552 14804 STD 0800 0487 3506 2776 0004424 0596 14838 OBS 0800 0487 35059 2776 14838 14840 OBS 0900 0452 3504 2778 0004249 0639 14840 OBS 0900 0452 35038 2778 14850 14851 STD 1000 0440 35025 2778 14851 14851 OBS 1100 0420 35022 2780 0004168 0724 14859 STD<											000	0514	+8 0	1455										
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OBS 0640 0469 34987 2772 14803 STO 0700 0449 34988 2774 0004444 0552 14804 OBS 0700 0449 34978 2774 14804 STD 0800 04487 3506 2776 0004424 0596 14838 OBS 0800 0487 35059 2776 14838 STO 0900 0452 3504 2778 0004249 0639 14840 OBS 0900 0452 35038 2778 14840 OBS 0900 0452 35038 2778 14851 OBS 1000 0440 3503 2778 0004298 0682 14851 OBS 1000 0440 35025 2778 14859 OBS 1100 0420 35022 2780 0004168 0724 14859 OBS 1100 0420 35022 2780 14859 STD 1200 0392 3499 2780 0004183 0766 14864 OBS 1200 0392 3498 2781 0004195 0808 14876 OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 OBS 1400 0372 3498 2782 0004224 0892 14905					ST						000	0483	31 0	505										
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OBS 0900 0452 35038 2778 14840 STO 1000 0440 3503 2778 0004298 0682 14851 OBS 1000 0440 35025 2778 14851 STD 1100 0420 3502 2780 0004168 0724 14859 OBS 1100 0420 35022 2780 14859 STD 1200 0392 3499 2780 0004183 0766 14864 OBS 1200 0392 34985 2780 14864 STD 1300 0380 3498 2781 0004195 0808 14876 OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 STD 1500 0370 3498 2782 0004224 0892 14905						0800	0487	35059	2	776					14	838								
STO 1000 0440 3503 2778 0004298 0682 14851 OBS 1000 0440 35025 2778 14851 STD 1100 0420 35025 2778 0004168 0724 14859 OBS 1100 0420 35022 2780 14859 STD 1200 0392 3499 2780 0004183 0766 14864 OBS 1200 0392 34985 2780 14864 STD 1300 0380 3498 2781 0004195 0808 14876 OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 STD 1500 0370 3498 2782 0004224 0892 14905											000	0424	+9 C	639										
STD 1100 0420 3502 2780 0004168 0724 14859 085 1100 0420 35022 2780 14859 STD 1200 0392 3499 2780 0004183 0766 14864 085 1200 0392 34985 2780 14864 STD 1300 0380 3498 2781 0004195 0808 14876 085 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 085 1400 0372 34977 2782 STD 1500 0370 3498 2782 0004224 0892 14905						1000	0440	3503	2	778	00	0429	98 0	682	2 14	851								
OBS 1100 0420 35022 2780 14859 STD 1200 0392 3499 2780 0004183 0766 14864 OBS 1200 0392 34985 2780 14864 STD 1300 0380 3498 2781 0004195 0808 14876 OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 OBS 1400 0372 34977 2782 14889 STD 1500 0370 3498 2782 0004224 0892 14905					OBS	1000					0.04	0414	. 8	724										
STD 1200 0392 3499 2780 0004183 0766 14864 OBS 1200 0392 34985 2780 14864 STD 1300 0380 3498 2781 0004195 0808 14876 OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 OBS 1400 0372 34977 2782 STD 1500 0370 3498 2782 0004224 0892 14905											001	V-410			14									
STD 1300 0380 3498 2781 0004195 0808 14876 0BS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 0BS 1400 0372 34977 2782 14889 STD 1500 0370 3498 2782 0004224 0892 14905					STO	1200	0392	3499	2	780	0.0	0418	3 0	766										
OBS 1300 0380 34975 2781 14876 STD 1400 0372 3498 2782 0004165 0850 14889 OBS 1400 0372 34977 2782 STD 1500 0370 3498 2782 0004224 0892 14905											0.0	0419	95 0	808										
OBS 1400 0372 34977 2782 14889 STD 1500 0370 3498 2782 0004224 0892 14905					OBS	1300	0380	34975	2	781					14	+876								
STD 1500 0370 3498 2782 0004224 0892 14905											00	0416	65 C	85										
								3498	2	782	00	0422	24 0	89	2 14	905								
							0370	34977	2	782					1 4	4905								

REFERENCE SNIP	LATITU	Dŧ	LDNGITUE		MARSDEN SQUARE	STA	TIDN TI	WE	YEAR	CRUISE	ORIGINA	TATION	\Box	DEPTH TO	MAX. DEPTH OF	OBS	WAVE ERVATIONS	WEA-	CLOUD			NODC	
COOL ND.	•	1/10		1/10 ==	10" 1"		DAY H			ND.	N	UMBER		BOTTOM	S'MPL'S	OIR.	HGT PER SE		TYPE AMI		_	NUMBER	
31 8016 EV	4412	N I	04625	WI	149 46 W	O5		98 MND	1967 BARG		990			3930 NO.	15		2 3	l xo	1 013	l	1	0048	d .
					COLD	TRAN!	DIR	OR FORCE	METE	ER [DRY ULB	WET	COOI	Dor I	OBSERV	ATIONS							
					DT	50	00	500	31	5 1	72	150	6	33									
MESSEN GI TIME	CAST ND.	CARE		TH (m)	1 10	5	*/	SIGA	7—AN	SPECIFIC	VOLUA	, E D	△ D (N. M (10 ³	. SOL	JND CITY	02 ml/l	PO 4~P µg ~ 01/1	10TALP	NO2-N µg - al/l	NO3-N ug = at/l	SI D4-5		S C
HR 1/10					1	+-		-				+	(10-	+						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-	
. 09	0	5 T 0 B S		000	1328 1328		41	25 25		002	112	1 0	000		011		'		'				
0 9	0	ST	D 0	010	1548	35	41	26	19	001	833	8 0	020	15	011 096								
		085 51		010 020	1548 1492		405 55	26 26		001	613	3 0	037		096 081								
00	3	085 ST		020 030	1492 1371		549	26 26		001	434	7 0	052		081 043								
		OBS	0	030	1371	35	460	26	62	001	737	. 0	0) 2	15	043								
		OBS ST	D 0	040 050	1257 1319		230	26 26		001	351	4 0	080		004 029								
		085 085		050 055	1319 1242		276	26 26							029 002								
		5 T	D 0	075 075	1230	35	28	26	77	001	307	7 0	113	15	001								
		0BS	0	080	1230 1246	35	280	26 26	78					15	001 008								
		OBS ST		093 100	1206 1219		251 28	26 26		001	293	7 0	146		995 001								
		085	0	100 102	1219 1265		280	26 26	79					15	001 019								
		ST	D 0	125	1244	35	38	26	81	001	276	5 0	178	15	015								
		08S ST		125 150	1244 1250		376 39	26 26		001	284	2 0	210		015 021								
		08S		150 200	1250 1296		390 57	26 26		001	254	1 0	273		021 047								
		085	0	200 250	1296	35	570	26	86					15	047								
		ST 08S	0	250	1193 1193	35	46 464	26 26	98		148		333	15	019 019								
		51 08s		300 300	1132 1132		43 425	27 27		001	078	1 0	389		006 006								
		ST 085		400 400	0848 0848		08 080	27 27		000	8754	+ 0	487		914 914								
		ST	D 0	500	0585	34	86	27	48	000	681	2 0	565	14	825								
		08S		500 530	0585 0618		856 975	27 27							825 845								
		ST OBS		600 600	0540 0540		95 950	27 27		000	566	5 0	627		825 825								
		085	0	629 681	0522	34	949	27	63					14	822								
		085 ST	D 0	700	0607 0587	35	148	27 27	68	000	523	1 0	682	14	868 862								
		OBS ST		700 800	0587 0473		94	27 27		000	512	7 0	733		862 830								
		OBS ST		800 900	0473 0441		940 96	27 27		000	4681	a 0	782		830 834								
		085	0'	900	0441	34	960	27	73	000	4000	5 0	102	14	834								
		08S		966 000	0472 0452	35 35	030 01	27 27		000	4591	7 0	829		859 856								
		085 ST		000 100	0452 0421	35 34	005 96	27 27	76		4615		875	14	856 859								
		OBS	1	100	0421	34	963	27	76					14	859								
		ST OBS	1	200 200	0405 0405		96 959	27 27		000	4538		921	14	869 869								
		ST 085		300 300	0394 0394	34	96 959	27 27		000	449(0 0	966	14									
		ST	D 1	400	0388	34	96	27	79	000	450	2 10	011	14	896								
		085 51	D 1	400 500	0388 0380	34	959 96	27	80	000	448	5 10	056		896 909								
		085	1	500	0380	34	959	27	80					14	909								

																			_					
	ERENCE	SHIP			ONGITUDE PEO	MARSOEN SOUARE	STATION TO	ME	YEAR			TATION	_	DEPTH	MAX.	085	WAV ERVA	ions	WEA-	CLOUD			NOOC TATION	
COD	10. £ NO.	CODE	LATITU	1/10	NGITUOE FOR	10" 1"	MO DAY H			CRUISE NO.		UMBER		BOTTOM	OF S'MPL'S	DIR	HGT P	ER SEA	COOE	TYPE AM			NUMBER	
3	1801	6 EV	4404		4544 W	149 45	05 21 1	30	1967		996	65		4151	15	02	3	2	X1	013			0049	
, ,	1001	α - ·				WAT	ER W	INO SPEED	BARO	-	R TEN	AP. °C	VIS,	NO.	SPEC	IAL								
						COLOR	TRANS. OIR.	OR	(mbs			BUEB	CODE	OEPTHS	OBZEKA	ATIONS								
						DT	SD 18	518	30	8 18	83	150	7	34	<u> </u>									
		MESSEN	CAST	CARD	DEPTH (m)	T *C	s */	SIGA	T-AA	SPECIFIC	VOLU	ME S	Δ Q,		UNO	O 2 ml/l			TOTAL-P	NO ₂ -N	NO3-N	5104-5		S.
		HR 1/1	NO.	TYPE	DEPTH (M)			3.0		ANDMA	LY-XIC	2	103	VELO	DCITY		h0 .	• a1/I	Na - 84	μg - ο1/I	μg ~ ot/l	yg - ol/	-	C
								1	[1,5				- 1				l	I	
				STD	0000	1539 1539	3549 35489	26 26		001	750	3 0	000		092 092									
		1:	30	OBS STD		1538	3549	26		001	751	2 0	018	15	094									
				OBS	0010	1538	35489	26							094									
		00	03	OBS STD	0015	1550 1609	35569 3590	26 26		001	608	1 0	034		122									
				OBS	0020	1609	35900	26						15	122									
				STD		1608	3595		48	001	572	7 0	050		124									
				OBS STO	0030	1608 1610	35950 3608	26 26	57	001	488	9 0	081		130									
				085	0050	1610	36080	26	57					15	130									
				OBS	0055	1615	36108		58 69	001	380	3 0	117		132									
				STD OBS	0075	1563 1563	3610 36099		69	001	200			15	119									
				STC	0100	1537	3607		73	001	353	2 0	151		115									
				OBS OBS	0100 0105	1537 1538	36070 36060		73						115									
				085	0115	1470	35900		75					15	094									
				STE		1450	3584		75	001	343	4 0	185		089									
				OBS ST	0125	1450 1441	35842 3583		75 76	001	341	0 0	218		089									
				OBS	0150	1441	35830		76					15	090									
				ST		1333	3559		80	001	312	0 0	284		060									
				OBS ST	0200	1333 1275	35590 3553		80	001	259	7 0	349		060									
				OBS	0250	1275	35525		87						5048									
				OBS	0270	1340	35735		90	003	186		410		5075 5067									
				STU OBS	0300	1300 1300	3571 35710		96 96	001	100	, ,	171		5067									
				OBS	0377	0990	35133	27	709						4964									
				OBS	0382	1030 1019	35289 3530		714 717	0.00	993	35 (519		4981 4980									
				STI OBS	0400	1019	35300		717	000				14	4980									
				OBS	0410	1029	35320		717						4986 4904									
				OBS OBS	0472	0792 0823	34990 35077		730 732						4918									
				STI		0759	3500	27	735	000	817	72 (609		4896									
				OBS	0500	0759	35000 3502		735 754	000	647	72 (683		4896 4865									
				STI OBS	0600	0639 0639			754	000	1041	12 (,00.		4865									
				ST	0700	0570	3502	2	763	000)566	68 (743		4854									
				OBS ST	0700 0800	0570 0505			763 770	0.00)497	79 (79		4854 4844									
				OBS	0800	0505	35015		770					1	4844									
				ST		0475			773	000)474	46 (84!		4849									
				OBS ST	0900 D 1000	0475 0452			773 776	000)45]	16 (089		4849 4856									
				OBS	1000	0452	35016	2	776					1	4856									
				ST		0440			778	000)444	44 (930		4868 4868									
				OBS ST		0440 0421			778 779	000)435	59	98		4876									
				OBS	1200	0421	35011	. 2	779					1	4876									
				ST	D 1300 1300	0400			780 780	000	043	39	102		4884 4884									
				OBS ST		0380	3496	2	780	000	043	70	106	7 1	4892									
				OBS	1400	0380	34963		780	0.01	26.6		112		4892									
				ST OBS		0380			780 780	000	044	12	111		4909 4909									
				005	1500	0300	5470																	

ERENCE ID.	SHIF		TITUDE	LDI	ADELTE POLITICAL STATES	MARSDEN SQUARE	STATION TIA	VE AR	CRUISE	IGINATO STA1			PTH OEPTH	DB2	WAVE ERVATIONS	WEA- THER	CLOUD		N ST	DDC	
NO.	CDD		1/10	_	1/10 E	10" 1"	MD DAY HR	.1/10	NO.	NUA	ABER		TOM S'MPL		HGT PER SE	COOL	TYPE AMI			JMBER	
1801	6 EV	43	56 N	04	504 W	149 35 WAT		62 1967	A II	9966 TEMP.	· ·	_	06 15	17	2 3	ХO	013			0050	
						COLOR	TRANS. DIR.	SPEED MET	ER DR	Y Y	VET CODE	10	BS. DBSER	CIAL VATIONS							
						DT	50 16	S16 31	-		78 7	╁	0								
	MESSE	NGR CA	ST CA	RD	D50711 (-)	T °C			SPECIFIC V			-	SDUND		PD4-P	TOTAL-P	NO ₂ -N	ND3~N	SI O 4 St		s
	HR 1	/10 CA	D. TY	'PE	DEPTH (m)	, ,	5 %.	SIGMA-T	ANOMAL	Y-X107	₹ △ 0 DYN. M X 10 ³	'.	VELOCITY	O ₂ ml/3	µg = 01/1	μg = o1/t	μg - at/i	µg + α1/1	yg - at/i	рН	c
			-	0		1.72	2544	245.		0 - 0			16.70								
	1	.62	06	STD BS	0000	1472 1472	3564 35640	2654 2654	0014	992	0000)	15073								
			08	STD	0003	1472 1405	35630 3558	2654 2664	0014	001	0015		15073								
	C	03	OB	35	0010	1405	35580	2664	0014	091			15052 15052								
			0 E	STD BS	0020	1405 1405	3559 35588	2665 2665	0014	061	0029	7	15054								
			S	STD	0030	1397	3559	2667	0013	907	0043	3	15053								
			08	55 510	0030 0050	1397 1375	35591 3558	2667 2670	0013	627	0070)	15053								
			08		0050 0055	1375 1331	35577 35505	2670 2674					15049 15034								
			0.8	35	0058	1350	35490	2669					15041								
			08		0064 0070	1319 1359	35480 35610	2674 2676					15032 15047								
			S	TD	0075	1350	3560	2677	0013	034	0103	3	15045								
			08 08		0075 0090	1350 1328	35600 35559	2677 2679					15045								
			S	то	0100	1307	3551	2679	0012	906	0136	>	15034								
			08		0100 0106	1307 1299	35512 35500	2679 2680					15034 15032								
			08	SS STD	0109 0125	1280 1282	35470 3549	2682 2683	0012	463	0168	2	15026 15029								
			08		0125	1282	35490	2683	0012	0))	0100	,	15029								
			08	TD sc	0150 0150	1278 1278	3550 35497	2684 2684	0012	592	0199	9	15032								
			S	TD	0200	1210	3546	2695	0011	707	0260)	15017								
			0B		0200 0235	1210 1125	35460 35311	2695 2699					15017								
			08	SS STD	0245 0250	1170 1158	35455 3546	2702	0010	07/	0217	,	15010								
			08		0250	1158	35460	2704 2704	0010	0/4	0317		15007 15007								
			S OB	TD	0300 0300	1040 1040	3525 35250	2710 2710	0010	440	0370)	14971 14971								
			S	TD	0400	0760	3491	2728	0008	681	0465	ò	14878								
			08 08		0400 0405	0760 0717	34910 34850	2728 2730					14878								
			QВ	S	0430	0741	35030	2740					14878								
			OB S	STD	0480 0500	0417 0514	34660 3478	2752 2751	0006	478	0541		14750								
			0B	S	0500 0511	0514 0493	34780 34820	2751 2756					14795								
			08		0550	0550	34910	2757					14789 14820								
			0 B S	STD	0570 0600	0521 0551	34945 3500	2763 2764	0005	436	0601		14812								
			08	S	0600	0551	35000	2764					14830								
			08	TD S	0700 07 00	0519 0519	3499 34990	2767 2767	0005	224	0654	+	14833								
				TD	0800 0800	0472 0472	3498	2772	0004	790	0704	+	14830								
				TD	0900	0463	34984 3502	2772 2 77 5	0004	520	0751		14830								
			OB	SS STD	0900 1000	0463 0445	35020 3501	2775 2777	0004	4.70	0796		14844								
			08	35	1000	0445	35009	2777					14853								
			S 08	TD SS	1100 1100	0421 0421	3499 34990	2778 2778	0004	417	0840		14859								
			S	TD	1200	0419	3499	2778	0004	488	0885		14875								
			08 S	STD	1200 1300	0419 0405	34990 3499	2778 2779	0004	440	0929)	14875								
			08		1300 1400	0405 0400	34985	2779					14886								
			0.8	35	1400	0400	3499 34985	2780 2780	0004	701	0974		14901								
			S OB	TD	1500 1500	0397 0397	3499 34985	2780	0004	518	1019	1	14916								
			OB	2	1500	0397	24782	2780					14916								

RESERVE CITY IOD. CODE LATITUDE LONGITUDE CODE SUBJECT CODE																								,					
318016 EV 44255N 04908 W 149 49 05 22 220 1967 9967 0064 00 24 3 2 X2 0 3 0051 WATER WINO SPECIAL		SHIP	1 4 71711		01/01/10/	F # E			STA			VE A	.				4			. 1									
318016 EV 44255N 04908 W 149 49 05 22 220 1967 9967 0064 00 24 3 2 X2 0 3 0051 WATER WINO SARO METER SULS SULS SULS SULS SECOLAL SECOLAL SULS SULS SULS SULS SECOLAL SECOLAL SULS SULS SULS SULS SECOLAL SECOLAL SECOLAL SULS SULS SULS SECOLAL SECOLAL SULS SULS SULS SECOLAL SECOLAL SECOLAL SULS SULS SULS SULS SECOLAL SECOLAL SECOLAL SECOLAL SECOLAL SECOLAL SECOLAL SULS SULS SULS SECOLAL					ONGITUDE	IND ON			110				AX				Bi		OF	1 00			COOL						
WATER WINO SARO COLOR TRANS COLOR COLOR TRANS COLOR TRANS COLOR COLOR TRANS COLOR		+ +				+							-		_		+		1										
COLOR TRANS TRANS COLOR TRANS TRA	318016	EV	4425	5N (14908 W	1 1	149					19	67				0	064	00	24	3 2		X 2	01	3		J	0051	
NO. STD OOO OSS9 3272 2582 O21822 OOO 14704							-			+					_	v													
DT SD 20 S10 166 089 078 7 06 MSSSENGE CAST CARO TYPE OEPTH m1 T 'C S '4. SIGMA-T SPECIFIC VOLUME ANOMALY-XI9? DYN, M. VELOCITY DYN O'L D										S. OIR.	1 01						PEC	DEPTHS	OBSERV	ATIONS									
M555ENGE CAST CARO OEPTH Im1 T 'C S */. SIGMA-T SECIFIC VOLUME X \(\times \) O O O O O O O O O O								DT	SI	20	+	-	166	089	0	78 7	,	06											
STD OOO OSS		MESSENGE			T-			_	1	-	100	-			_			<u> </u>			T					NO 11	61.0 61		S
STD 0000 0559 3272 2582 0021822 0000 14704 220 0BS 0000 0559 32720 2582 14704 0BS 0003 0559 32720 2582 14704 STD 0010 0280 3280 2617 0018539 0020 14589 001 0BS 0010 0280 3280 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495		IIME (L NO.		OEPTH	lm i	Т	*C	!	s */	SIC	3MA-	-1			DYN.	M.			02 ml/									C
220 OBS 0000 0559 32720 2582 14704 OBS 0003 0559 32720 2582 14704 STD 0010 0280 3280 2617 0018539 0020 14589 O01 OBS 0010 0280 3280 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495		220			+				+		+		\dashv			X 11	,-	-				-		÷	+				+
220 OBS 0000 0559 32720 2582 14704 OBS 0003 0559 32720 2582 14704 STD 0010 0280 3280 2617 0018539 0020 14589 O01 OBS 0010 0280 3280 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495											1		- 1						Į.						ı				
OBS 0003 0559 32720 2582 14704 STD 0010 0280 3280 2617 0018539 0020 14589 001 OBS 0010 0280 32800 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495														002182	22	000	0												
STD 0010 0280 3280 2617 0018539 0020 14589 001 0BS 0010 0280 32800 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495																													
001 0BS 0010 0280 32800 2617 14589 STD 0020 0059 3294 2644 0016006 0037 14495														003050		000													
STD 0020 0059 3294 2644 0016006 0037 14495														001853	39	002	2.0												
														001/0/		001	. 7												
														001000	, 0	003	, (
STD 0030 0030 3297 2648 0015628 0053 14483														001563	2 8	005	. 3												
OBS 0030 0030 32970 2648 114483														001002		00.													
STD 0050 -0010 3302 2654 0015030 0084 14469														001503	3.0	008	34												
0BS 0050 -0010 33023 2654 14469														001-0.		0 - 0													

REI	FERE	NCE	SHIP					===	MARSI	DEN	STATION					QRIG1N	ATOR"	5	DEP	In occ	AX, PTH		VAVE	WEA-	Cronc			NO0C	
CTR	TY .	ID.	CODE	LATITU	1	LONG		12 5 L	SOUA		IGA			YEAR	CRUIS		OITATE		BOTT	ou. 0	F		RVATIONS	THER	CODES			UMBER	
COL	36	NO.			1/10		1/10	=	10°	1°	MO OA	Y HR,1	/10		NO.	1	NUMBI	R		S'M	PL'S (DIR. H	GT PER SE	A	TYPE A N	17		0.0.00	
3	18	016	EV	4422	5 N	048	1525W]	149	48	05 22	2 23	6 1	1967		99	68		080	05 0	7	24 .	2 2	X 2	03	1	i	0052	
										WAT	ER	WIN		BARC)-	AIR TE	MP. °C	VIS	NO		SPECIAL								
										COLOR	TRANS. C	IR. S	OR OR	METE	R	ORY	WET	COD	DEPT		ERVA TIC	SNC							
									-	CODE	(m)	F	ORCE	lmbs	.1	BULB	BUL	-				_							
										DT	50 2	20 5	510	26	8	089	07	8 7	2	2		1							
		- 1	MESSENGR	CAST	CAR	P .									SPECIE	IC VOLU	I AN F	₹ △ C		SOUND			PO ₄ -P	TOTAL-P	NO2-N	NO3-N	SI O4-Si		s
			TIME	NO.	TYP	PE	OEPTH !	(m i	T	7	5 */.	.	SIGM	A-T	ANO	MALY-X	0.7	X 103	۸- ۱	/ELOCITY	02	ml/t	µg = 01/1	μg = 01/1	μg = σt/l	μg = et/1	yg - 01/1	pΗ	C
			MR 1/10	+							1	-					-		+		+-								$^{+}$
								_				- 1					_		Ι,		.							1	11
						TO	000			359	3286		261		0.0	1876	5	0000		14622									
			23	6	OB		000			359	3285		261							14622									
					OB.	-	000			359	3283		261		0.0	1745	. 0	0018		14622 1455]									
			00	1		TD	001			191	3285		262		00	1740	0	0018		1455] 1455]									
			00	Ţ	QB	TD	001			108	3285		263		0.0	1698	.0	003		14515									
					08		002			108	3284		26:		00	1070		005.		14519									
						TD	003		-	089	3304		265		0.0	1458	6	005		14429									
					QB.		003			089	3304		265		00	1		000		14429									
						TD	005			120	3313		266		0.0	1379	4	0079		14419									
					OB		005			120	3313		266							14419									
					S	TO	007	5	-01	075	3324	4	26	74	0.0	1310)4	011	3	14446	5								
					08	S	007	5	-00	75	3323	39	26	74						14446	ó								
					S	TD	010	0	-0(75	3326	5	26	76	0.0	1293	1	0146	5	14451	l								
					OB	S	010	0	-00	075	3326	50	26	76						14451									
					S	TD	012	5	→0(348	3335	5	268	3 2	00	1232	6	017	7	14469	9								
					QВ	S	012			348	3339		268							14469									
					_	TD	015			25	334(268		0.0	1205	4	020		14484									
					QВ		015			25	3340		268					- 0		14484									
						TD	020			067	3367		270		0.0	1048	15	026		14538									
					OB	-	020			067	3367	-	270							14538									
					08	-	023			118	3382		27		0.0	0007		A 2 1 :		14569									
						TD	025			170 170	3399		27:		00	0907)	031		14596 14596									
					08	TD	030			270	3436		27		0.0	0687	1,	035		14654									
					08		030			270	3435		274		00	0001	4	000.		14654									
					08		031			403	345		274							14715									
					08		034			420	3464		275							14728									
					ОВ		037			394	3465		279							14723									
						TD	040			416	3475		275		00	0545	4	041		14738									
					OB		040			416	3479		275		- 0					14738									
						TD	050			435	3490		276		00	0466	4	046		14764									
					ОВ		050			435	3489		276							14764									
						TD	060	0		433	3496		27		00	0446	9	051		14780									
					ОВ	S	060			433	3493		27							14780									
						TD	070			425	349	3	27:		00	0449	1	0550	5	14794	4								
					ОВ		070			425	3493		27							14794									
					ОВ	5	073	0	0	425	3493	33	27	73						14799	9								

REFERENCE SHIP	LATITUD	£ LO	NGITUDE H	MARSOEN SOUARE	STATION TI	ME	YEAR		RIGINA			DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA-	CLOUG			NOOC	
CODE NO. CODE		1/10	NGITUDE E	10	MO DAY H	R.1/10		CRUISE NO.	N	TATION UMBER		BOTTON	OF S'MPL"		HGT PER SE	0000	TYPE AMI			NUMBER	
318016 EV	4420	N 04	8395W	149 48		800	1967	L	996		_ 1	2377	15	24	2 4	X2	0 3			0053	1
				COLOR	TRANS OIL	SPEEC	BARO	R	IR TEN	WET	VIS.	NO. 085.	SPE	LAL							
				COOE	(m)	OR		-	JLB	BULB	-	DEFINS	-								
				DT	SD 24	511	28		67	056	7	32			1 1	1					
MESSENGR TIME OF HR 1/10 T	NO.	CARO TYPE	DEPTH (m)	7 °C	s */	SIG	MA-T	SPECIFIC	VOLUA	ME S	△ D N. M 10 ³	. SO	DCITY	O 2 ml/I	PO4-P pg - 01/I	TOTAL-P	NO2-N ug - ol/l	NO3-N µg - at/l	21 O4-	/l pH	SCC
FR. 1710						+						+-								+-	+
, ,		STD	0000	0213	3286		27	001	761	1 0	000		559		'		'		1		
008		OBS	0000	0213	32855 3300		27	001	605	7 0	017		559 530								
		085	0010	0140	32995	26	43					14	530								
003		STD	0020	0140 0140	3299 32990		43	001	6096	6 0	033		532 532								
003		STD	0030	-0010	3312		61	001	433	4 0	048		467								
		OBS OBS	0030	-0010 0029	33115 33170		61						467								
		STD	0050	0073	3325		68	001	370	3 0	076		510								
		OBS STD	0050 0075	0073 0005	33252 3346		68	001	176	6 0	108		510 486								
		OBS	0075	0005	33459		88	001	110	0 0	100		486								
		STD	0100	0062 0062	3364 33638		700 700	001	070	2 0	136		519 519								
		085	0110	0121	33715		02						548								
		085	0118 0125	0073 0095	33680 3379		702	000	07/-1	5 0	1 (2		527								
		STD	0125	0095	33790		710 710	000	974!	> 0	162		540 540								
		085	0145	0201	33980		18						593								
		STD	0150 0150	0163 0163	3394 33940		717	000	907	1 0	185		576 576								
		085	0165	0140	34010	27	25					14	570								
		STO OBS	0200	0250 0250	3427 34272		737 737	000	726	7 0	226		627 627								
		OBS	0240	0396	34570	27	47				2	14	701								
		STD	0250 0250	0360 0360	3452 34519		747 747	000	6460	0 0	260		686 686								
		OBS	0280	0420	34685		754				_	14	719								
		STD	0300	0410 0410	3473 34725		758 758	000	547	8 0	290		718								
		OBS	0358	0400	34745	27	761					14	724								
		STD	0400	0431 0431	3485 34845		765 765	000	491	1 0	342		745								
		STD	0500	0448	3493	27	770	000	461	3 0	390	14	770								
		OBS	0500 0600	0448	34925 3494		770 771	000	453	9 0	435		770 783								
		OBS	0600	0439	34935	27	771					14	783								
		STD	0700 0700	0424	3494 34935		773 773	000	446	5 0	481		793 793								
		STD	0800	0409	3494	27	775	000	4386	6 0	525	14	804								
		OBS STD	0800 0900	0409 0417	34935 3496		75	000	4401	8 0	569		804 824								
		085	0900	0417	34958		776	000	440	5 0	707		824								
		STD	1000	0402	3495		777	000	438	1 0	613		834								
		OBS	1000 1100	0402 0395	34950 3495		777 777	000	438	7 0	657		834								
		OBS	1100	0395	34950	27	777					14	848								
		STD	1200 1200	0395 0395	3495 34950		777 777	000	447	8 0	701		865 865								
		STD	1300	0393	3495	27	778	000	452	1 0	746	14	881								
		OBS STD	1300 1400	0393	34953 3495		778 779	000	446	9 0	791		881 893								
		OBS	1400	0382	34953	27	779					14	893								
		STD	1500 1500	0377 0377	3495 34953		179 179	000	449(0	836		908								
		, - 5	1000	33.7	5.755	- 1	, ,					. 7	, 00								

REFERENCE	SHIP				MARSOEN	STATION TIP		EAR		RIGINAT			OEPTH TO	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUG		17.7	DDC	
CTRY IO.	COOE	LATITU	DE 1	TONGITUOE	10° 1°	MO DAY HE	- 1	EAR	CRUISE NO.	AT2 IUN	MBER		воттом	OF S'MPL'S		HGT FER SE	20.05	TYPE AMI			JMBER	
318016	EV	4417	5N (04826 W	149 48			967		9970) _		3109	15	24	1 4	X 2	0 3		- 1 4	0054	
. 510010					WA	TER W	SPEED	BARC)• <u> </u>	IR TEMP		VIS.	NO.	SPEC	CIAL							
					COLOR	TRANS. DIR.	OR FORCE	M ETE (mbs			WET	CODE	DEPTHS	OBSERV	A HONS							
					DT	SD 26	506	28	4 0	61	056	7	32									
	MESSENGR		CARD	QEPTH (m)	7 °C	5 %.	SIGM.	A -T	SPECIFIC	VOLUME	ξ OY	A D.		ОИС	0 ₂ ml/l	PO4-P	TOTA L-P	NO ₂ -N	NO3-N	51 O4-Si	pН	Š
	TIME HR 1/10	Ĭ NO.	TYPE	OCT THE OWN					ANUM	ALY-X107	X	103	VELC	DCITY		ا/10 + وبر	µg = at/l	μg = 01/I	νg - αI/I	μg = 01/l		
		1						. 1					1				!					11
	02	7	ST OBS	0000	0348 0348	3296 32955	262		001	7935	00	000		619								
	02	,	ST		0401	3321	263	8 B	001	6545	0	017	14	646								
			OBS	0010	0401 0387	33205 3347	263 266		0.01	4423	0.0	033		646								
	00	3	OBS	0020	0387	33470	266		001	7723	•	0 0 0		646								
			OBS	0025	0395	33460	265		001	2221	_	o / 7		650								
			ST OBS	0030	0250 0250	3346 33459	267		001	3324	01	047		588								
			ST	D 0050	0315	3375	269	0	001	1692	0	072		624								
			08s	0050	0315	33748 33842	269							624								
			ST		0344	3384	269		001	1275	0	100	14	642								
			OBS	0075	0344	33840	269							642								
			OBS ST	0090 D 0100	0283 0293	34060 3414	271		000	8552	0	125		628								
			085	0100	0293	34143	272							628								
			ST		0340	3437 34371	273		000	7278	0	145		655								
			OBS ST	0125 D 0150	0340 0412	3450	274		000	7040	0	163		692								
			085	0150	0412	34500	274							692								
			08S		0349 0416	34503 34609	274							668 701								
			ST	-	0355	3458	275	52	000	5911	0	195	14	677								
			OBS		0355 0508	34580 3485	275		000	5586	0	224		677								
			ST OBS		0508	34850	27		000	17760		- 24		753								
			OBS	0283	0528	34921	276		000	5283	0	251		767 749								
			ST OBS		0480 0480	3486 34855	276 276		000	12283	U	291		749								
			085	0310	0457	34850	276	53						741								
			OBS ST		0539 0526	35000 3500	276	-	000	4883	0	302		785 787								
			OBS		0526		276						14	787								
			ST		0504 0504	3503 35028	2 7		000	4514	0	349		795 795								
			OBS ST		0455		27		000	4312	0	393	3 14	790								
			OBS	0600	0455	34991	27		000	14242	^	420		790								
			ST OBS		0424 0424		27		000	4242	0	436		794 794								
			ST	D 0800	0412	3497	27	77	000	4199	0	478	3 14	805								
			OBS		0412 0387		27		000	4190	0	520		+805 +811								
			ST OBS		0387		27		500		J			811								
			ST	D 1000	0396		27		000	4249	0	562		832								
			085 ST		0396 0393		27		0.00)4304	. 0	605		+832 +847								
			089	1100	0393	34958	27	78					14	4847								
			ST 085		0380 0380		27		000)4232	. 0	648		4859 4859								
			S1		0377	3496	27		000	04282	. 0	690	0 14	4874								
			085	1300	0377		27		00	14245	. ^	722		4874								
			S1 089		0375 0375		27 27		000)4343) U	733		4890 4890								
			\$1		0370		27		000	04363	3 0	777	7 1	4905								
			085		0370	34958	27	81					1	4905								

REFERENCE		- w	MARSDEN	STATION TII	ΑĒ		ORIGIN	ATDR'S		DEPTH	MAX.		WAVE	WEA-	CLOUD			NODO	
CTRY ID. CDDE LA	TITUDE LON	GITUDE SO	SOUARE	MO DAY H		CRUIS	SE S	TATION		TD BOTTOM	DEPTH OF S'MPL"		HGT PER SEA	THER	CDDES			STATIO	N IR
					42 196	7	99	71		3475	_	25	1 2	Х6	0 3			005	5
		, ,	WAT		IND BA	RD-	AIR TE	_	vis.	NO. OBS.		CIAL							
			COLOR	TRANS. DIR.		TER bs)	DRY BULB	BUL8	CODE	DEPTHS	OBSERV	ATIONS							
			DT	SD 25	S10 1	79	078	067		33									
MESSENGR CA	ST CARD D. TYPE	DEPTH (m)	r *c	s *4.	SIGMA-T	SPECII	FIC VOLU	ME D	△ D YN. M. x 10 ³	. VEL	OCITY	02 ml/l	PD 4-P µg - 01/I	TOTA LP μg = α1/I	NO2-N :	NO3-N μg - 01/1	SI O4- ug - ot	i P	H SC
HR 1/10	-					-		_	X 10-	+									
, ,	STD	0000	0397	3296	2619	00	1835	3 0	000		640		'		'				
042	OBS STD	0000	0397 0186	32959 3298	2619 2639	0.0	1649	o 0	017		640 550								
	OBS	0010	0186	32978	2639					14	550								
003	STD OBS	0020	-0014 -0014	3301 33010	2653 2653	00	1512	2 0	033		4462 4462								
	STD	0030	-0070	3316	2668	00	1373	3 0	048		440								
	OBS OBS	0030	-0070 -0110	33162 33245	2668 2676						4440								
	STD	0050	0155	3351	2683	00	1225	0 0	074		551 551								
	08S 08S	0050 0060	0155 -0025	33510 33390	2683 2684						469								
	STD	0075	0030	3356	2695	00	1113	0 0	103		499								
	OBS STD	0075 0100	0030 0064	33559 3368	2695 2703	00	1039	4 0	130		520								
	OBS STD	0100 0125	0064 0260	33680 3401	2703 2715	0.0	0928	.7 O	154		520								
	OBS	0125	0260	34010	2715					14	616								
	STD OBS	0150 0150	0405 0405	3429 34288	2724 2724	00	0855	9 0	177		686 686								
	OBS	0160	0331	34215	2725					14	+655								
	OBS OBS	0170 0182	0350 0487	34290 34585	2729 2738						+666								
	STD	0200	0440	3451	2738	00	0730	9 0	216	14	+712								
	OBS OBS	0200 0215	0440 0341	34510 34510	2738 2748						+712 +672								
	STD	0250	0526	3481	2752	00	0609	6 0	250	14	+759								
	0BS 0BS	0250 0265	0526 0425	34810 34710	2752 2755						+759 +719								
	STD	0300	0484	3481	2756	00	0566	5 0	279	14	+750								
	OBS OBS	0300 0340	0484 0392	34810 34730	2756 2760						+750 +718								
	STD	0400	0501	3494	2765	00	0499	7 0	333		+776								
	0BS 0BS	0400 0440	0501 0536	34942 35015	2765 2767						+776 +798								
	STD	0500	0500	3500	2769	0.0	0468	8 0	381		+793								
	OBS STD	0500 0600	0500 0421	34998 3494	2769 2773	00	0433	30 0	426		+793 +776								
	OBS	0600	0421	34935	2773 2775	0.0	0430	.1 0	469		4776 4787								
	STD OBS	0700 0700	0410 0410	3494 34935	2775	00	1043(,1 (707		4787								
	STD OBS	0800 0800	0400 0400	3494 34935	2776 2776	0.0	0428	30 0	512		4800								
	STD	0900	0400	3494	2776	0.0	0432	22 0	555	14	+817								
	OBS STD	0900 1000	0400 0395	34942 3494	2776 2777	0.0	0435	5 0	1599		4817 4831								
	OBS	1000	0395	34942	2777					14	4831								
	STD OBS	1100 1100	0383	3494 34942	2778 2778	0.0	0429	99 0	642		4843								
	STD	1200	0384	3494	2778	0.0	0440	00 0	685	14	4860								
	OBS STD	1200 1300	0384 0375	34942 3494	2778 2779	0.0	0437	75 0	729		4860 4873								
	OBS	1300	0375	34942	2779					14	4873								
	STD OBS	1400 1400	0372 0372	3494 34942	2779 2779	00	0 4 4 2	2 0	1773		4889 4889								
	STD	1500 1500	0370 0370	3494 34942	2779 2779	0.0	0448	30 0	818	14	4905 4905								
	005	1,000	0310	34742	2119					1.	マグレン								

REFERENC	CE SHIP			# F	MARSOEN	STATION TH				RIGINA			DEPTH	MAX.	280	WAVE ERVATIONS	WEA-	CLOUD		N	ODC	
CODE N	D. CODE	LATITU	1/10 LOI	NGITUDE S	SOUARE 10° 1°	MO DAY HE		YEAR	CRUISE NO.		ATION		TO BOTTOM	OF S'MPL'S		HGT PER SEA	THER	TYPE AMT		NI	JAMBER	
	24 54							04.7				1	2740								2056	
3 1/8 0	16 EV	4412	N 04	759 W	149 47 WAT		57 1	967	A	997 IR TEMI			3749 NO.	15		1 2	X6	0 3	1	1 (0056	
					COLOR	TRANS. DIR.	SPEED OR FORCE	METER	. 0	RY	WET	VIS.		SPE(OBSERV	ATIONS							
					CODE	[m]	FORCE	(mbs)	80	11.0	SULB		Utrins									
					DT	SD 24	510	274	4 0	83	078	6	30	<u> </u>								
	MESSENGE	CAST	CARO	DEPTH (m)	1 %	s */**	SIGM	A -T	SPECIFIC	VOLUM	E S	△ D N. M. 10 ³	so	UND	O 2 ml/1		TOTAL-P	NO2-N	NO3~N	\$104-\$1	рΗ	Š
	HR 3/10	Y NO.	TYPE						ANOMA	CLA-XIO.	Х	103	VEL	OCITY		µg - 01/1	μg = et/l	µg - 01/1	yg - at/1	yg - oI/l		C
			510	0000	1105	3460	264		001	5654	0.0	000		936								
	0.5	7	OBS	0000	1105	34600	264		001	, 707		016		936								
			ST0 OBS	0010	1355 1355	3536 35360	265		001	4707	01	015		033								
			STO	0020	1409	3572	267		001	3191	0.0	29		057								
	0.0	3	OBS	0020	1409	35718	267							057								
			STD	0030	1364	3562	267		001	3022	0.0)42		043								
			OBS	0030 0050	1364 1330	35622 3560	267		001	2570		068		043								
			STD OBS	0050	1330	35600	268		001	2710		700		034								
			STO	0075	1270	3547	268		001	2428	01	99		017								
			OBS	0075	1270	35471	268	34					15	017								
			STD	0100	1265	3549	268		001	2253	0	130		019								
			OBS	0100	1265	35491 3540	268		001	1954		160		019								
			ST0 OBS	0125	1210	35400	269		001	1954	. 0	100		004								
			STO	0150	1180	3536	269		001	1759	0	190		997								
			OBS	0150	1180	35360	269							997								
			STD	0200	1040	3524	270		001	0301	0	245		954								
			OBS STD	0200 0250	1040 0712	35238 3476	270		000	8896		293		954								
			OBS	0250	0712	34755	272		000	0070	, ,	- , ,		833								
			085	0270	0688	34790	272	29						827								
			085	0285	0747	34990	273				_			856								
			STD OBS	0300	0735 0735	3498 34980	273		000	7633	0	334		853								
			OBS	0335	0618	34830	274							811								
			OBS	0360	0717	35090	274							857								
			STO	0400	0585	3495	275		000	6017	0	403		810								
			OBS	0400	0585 0416	34945 34762	275							750								
			OBS STD	0500	0416	3489	276		000	4965	0	457		772								
			OBS	0500	0454	34887	276		000					772								
			OBS	0550	0530	35018	276							813								
			STD	0600	0481	3496	276		000	4862	0	507		801								
			08s STD	0600 0700	0481	34959 3502	276		000	4462		553		801								
			085	0700	0473	35015	277		000	7702	0	-))		815								
			STD	0800	0475	3503	277		000	4494	0	598	14	832								
			OBS	0800	0475	35029	277		000					832								
			STD OBS	0900 0900	0435	3501 35005	277		000	4281	. 0	542		832								
			STD	1000	0418	3500	27		000	4208	0	684		842								
			OBS	1000	0418	35000	27						14	842								
			STD	1100	0408	3499	277		000	4254	0	727		854								
			OBS	1100	0408	34990	271					7,		854								
			STD	1200 1200	0394	3499 34988	278		000	4186	0	769		865								
			SID	1300	0384	3498	278	-	000	4209	0	811		877								
			OBS	1300	0384	34980	278						14	877								
			STO	1400	0383	3498	278		000	4284	0	853		894								
			OBS	1400	0383	34980	271		000	4241	_	901		894								
			STD	1500 1500	0373 0373	3498 34980	278		000	4241	. 0	896		906								
			003	1500	0,7,5	54700	211	-						,,,,,								

CTRY IO.	SHIP	LATITE	IOE LO	NOCTE STUDIO	MARS GEN SOUARE	STATION TO	ME	YEAR	OR CRUISE	_	2°9OTA	\Box	DEPTH	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUD			NODC STATION	
		· -	1/10	1/10		MO DAY H	R,1/10		NO.	NI	UMBER	_	BOTTOM	OF S'MPL'		HGT PER SEA					NUMBER	
31801	6 EV	4410) N O	4746 W	149 47 WA	05 23 C	72	1967	1 10	997		\square	3840	15	24	2 2	X2	03	1		0057	l
					COLOR	TRANS. DIR.	SPEED		OR	Y	WET	VIS.	NO. OBS. DEPTHS		CIAL							
					DT	SD 25	510			-+	100	7	25									
	MESSEN		CARO	050711.4-1			T		SPECIFIC V	_		_		IND		100 0						7,
	HR 1/1	or NO.	TYPE	GEPTH (m)	T ℃	s %.	SIGA	T-AN	ANOMAL	Y-X10	y' DY	△ D N. M 10 ³	- VELC		O ₂ ml/l		101AL-P vg - 01/I	NO2-N ug - at/l	NO3~N NO3~N	\$1 O4-		c c
	1				1040																	\forall
	07	72	STO OBS	0000	1263 1263	3492 34923	26 26		0016	119	9 00	000		995 995								
			STO	0010	1360	3537	26	57	0014	732	2 00	15	15	035								
			OBS STD	0010	1360 1383	35370 3549	26 26		0014	338		30		035								
	0.0	13	OBS	0020	1383	35490	26	62					150	046								
			ST D 085	0030	1382 1382	3563 35630	26		0013	321	. 00) 4 4		049 049								
			STD	0050	1331	3559	26	80	0012	671	. 00	70										
			OBS	0050 0075	1331 1275	35589 3547	26		0012	547		101	15 15	35								
			OBS	0075	1275	35465	26	82					150									
			STD OBS	0100	1250 1250	3544 35438	261		0012	358	0 1	132	150									
			STD	0125	1230	3541	261		0012	253	0 1	63	150	014								
			OBS STO	0125 0150	1230 1183	35410 3532	261		0012	127		0.	150									
			OBS	0150	1183	35316	268		0012	13/	01	94	149									
			OBS STD	0185 0200	1134 1140	35318 3537	269		0011	1 - 1	0.7		149	986								
			OBS	0200	1140	35365	27(0011	121	0 4	52	149									
			STD OBS	0250 0250	1000	3524	271		0009	708	0 =	04	149	948								
			STD	0300	0865	35242 3516	271	-	00082	236	0.3	49	149									
			OBS	0300	0865	35160	273	32					149									
			STO OBS	0400 0400	0675 0675	3499 34993	274		00068	359	04	24	148									
			SID	0500	0570	3501	276	52	00054	476	04	86	148									
			OBS STO	0500 0600	0570 0524	35010 3503	276		00048	300	0.5	38	148	321								
			OBS	0600	0524	35026	276	9	00040	199	0,5	00	148									
			STD	0700 0700	0476 0476	3501 35010	277		00045	36	05	85	148									
			STD	0800	0457	3501	277	75	00044	11	06	30	148									
			OBS STO	0800 0900	0457 0439	35010 3501	277		00042	204	06	73	148									
			OBS	0900	0439	35010	277	7	00072	. 7 7	00	()	148									
			STD	1000 1000	0425 0425	3501 35010	277		00042	221	07	16	148									
			STD	1100	0410	3500	278		00042	205	07	58	148									
			OBS STD	1100 1200	0410 0395	35000 3499	278 278		0007.1	a <i>t</i> .	0.8	00	148									
			085	1200	0395	34990	278		00041	.04	UO	00	148									
			STO OBS	1300 1300	0373 0373	3497 34965	278 278		00041	80	08	42	148	73								
			STD	1400	0368	3496	278		00042	76	08	84	148									
			OBS STD	1400 1500	0368 0366	34955 3496	278		000/3				148	87								
			OBS	1500	0366	34955	278 278		00043	33	09	27	149 149									
													. ,									
REFERENCE					MARCHEN	£74.716			OPIC	INAT	7007			MAX.		47.4.V.C		CIOUD				
CTRY ID.	SHIP	LATITUD	1	IGITUDE S	MARSDEN	STATION TIM		YEAR C	RUISE	STA	TION		TO TOM	DEPTH	ORSE	VAVE RVATIONS	THER CODE	CODES		-	NODC TATION NUMBER	
-			1/10	1/10 =		O DAY HR			NO.		MBER	+		S'MPL'S		GT PER SEA	-	TYPE AMT				
31 8016	EV	4425	2N U4	908 W	149 49 C	R W1	ND	967 BARO-	AIR	1974 TEMP.		VIS	NO.	01		3 2	061	0 3			00581	
					COLOR 1		SPEED	METER	DOY	1,	WET	A12"	085.	3786	100							

CT	_	ID, HO.	SHIP	LATITU		LONGITUDE	10:	ž (ARE		TION LG MT	1	YEAR	CRUIS		TATIO)N	GEP TO BOTT	0	MAX. DEPTH OF	OE	WAV SERVA	TIONS	11	EA- HER DDE	CLOU	ES			DON SITAT2 BMUN	N.	
\vdash	\rightarrow	3016	EV	4425	1/10 5N	04908	-	149				145		+	99	74		000	- 13	01	018	3	ER SE	^ -	6	TYPE A	\neg			00	\dashv	
									WA	TER		WIND	BAR	0	AIR TEA	MP. Y	VIS	NO		SPEC	CIAL											
									COLOR	TRANS	i. DIR	SPEE: OR FORG	Total .		BUL3 DXA	BU1	T COC	DEPT			2 NOIT A											
									DT	50	0.0	51	5 20	7	056	0:	6 5	0,	9													
			MESSENGE TIME HR 1/10	º NO.	CAF		H (m)	1	°C	2	٠/	sic	MA-T		IC VOLU		₹ Δ C OYN. A x 10 ³	۸. ۱	SOUN		O2 ml/		4~P - 01/1	TOTAL		NO2←1 µg - 01/		NO3-N 1/10 - gu	SI O4-S yg - a1/		Н	SCC
																																П
					5	TO 00	00	0	560	32	67	2	578	0.0	2221	6	0000)	147	04												
			14	5	OB	5 00	00	0	560	32	2669	2:	578						147	04												
					ОВ		06		557		688	2	580						147	04												
							10		495		69		587	00	2136	2	002		146													
			0.0	0	OB	_	10		495		2690		587						146													
							20		295		78		614	0.0	1881	6	004		145													
					OB		30		1295		2780 290	_	614	00	1660	<i>t.</i>	0060		145													
					08		30		120		2895		636 636	00	1669	4	0000		145													
					08		35		1115		3090		652						145													
					ОВ		40		1054		3097		657						144													
	- ^						50		051		10		657	00	1477	8	009	1	144	98												
T :	58				ОВ	S 00	50	C	051	33	095	2	657						144	98												
					OB	s 00)55	C	050	33	094	2	657						144	98												

REFERENCE	SNIP	LATITU	IDE I	ONGITUDE	MARSDEN SQUARE	STATION THE		ORIGINA	TOR'S	DEPTH	MAX. DEPTH		WAVE	WEA-				NODC	
CODE NO.	CODE		1/10	1/10	10° 1°	MO I DAY IHR	YEAR		ATION	BOTTOM	OF S'MPL'S		ERVATIONS	THER	COOE			TATION	
31801	6 EV	6676											HGT PER SE	A	17PE AN	_			
31 801	ol c A l	4424	NIO	49005W	149 49 WAT		52 1967	997		0165	02	08	3 2	06	1013			0059	
					COLOR		SPEED BAR	0-	WET COD		SPEC								
					CODE	(m) DIR	FORCE (mb		SOTS COD	DEPTHS	OB2ESAN	TIONS							
					DT	50 08	S15 20	7 056	056 5	11									
	MESSENGI TIME HR 1/10	OF NO.	CARD TYPE	DEPTH (m)	1 %	5 */	SIGMA-T	SPECIFIC VOLUM		300	JND	O ₂ ml/l	PO4-P	TOTAL-P	NO2+N	NO3-N		рН	500
	FIX 1710		_	+		-			X 10-				-		-	pg - 007	7, 0		H
	1	1	1 510	0000	0505	3273	2589	007114	0000	, ,]		1	1	1		[
	15	2	OBS	0000	0505	32729	2589	0021165	0000		682								
	10	_	OBS	0001	0435	32710	2595				682 653								
			STD		0295	3269	2607	0019492	0020		594								
	0.0	0	OBS	0010	0295	32690	2607	0027.72	. 0020		594								
			STD		0184	3272	2618	0018474	0039	14	548								
			085	0020	0184	32715	2618			14	548								
			STD	0030	0150	3288	2633	0016996	0057		536								
			OBS	0030	0150	32880	2633				536								
			085 ST0	0045	0034	32940 3297	2645 2647	0015/00			487								
			085	0050	0033	32970	2647	0015638	0090		488 488								
			STD	0075	0028	3298	2649	0015531	0129		490								
			OBS	0075	0028	32980	2649	001001	0123		490								
			STD	0100	0019	3298	2649	0015458	0167		490								
			OBS	0100	0019	32983	2649				490								
			STD	0125	0012	3298	2650	0015424	0206		491								
			OBS	0125	0012	32982	2650			14	491								
			STD	0150	0006	3300	2651	0015250	0244	14	493								
			OBS	0155	0005	33000	2651			144	493								

-		ENCE			1		_	Т				. 1			0010111				MAX.				_		1			
CTR	_	ID.	PIHE	LATITU	DE	LONGITUE	DAUFT	SOU	SDEN		NIT NC		YEAR	CRUISE	_	TATION		DEPTH	OEPTH	089	WAVE ERVATIO	NS	WEA-	CLOUD		S1	ATION	
COD	DE	NO.	CODE	•	1/10		/10	10°	1°	MO DA	AY HR.	1/10		NO.	1 3	UMBER	- 1	BOTTOM	S'MPL"	DIR	HGT PER	SEA	CODE	TYPE AM	T	N	UMBER	
3	3 1 8	3016	EV	4422	5N	04852	5 W	149	48	05 2	3 1	60 1	967		99	76		0805	08	08	1 4		05	0 3			0060	
, ,	, 110	0 2 9		1422		0 10 2 2	- 11	1 - 1 /	WA		_	ND	BARC		AIR TEA		т	NO.			1 - 1 - 1		1 02	, 0.3	1	'	00001	
									COLOR	TRANS.	OIR	SPEED	METE	R	DRY	WET	COD	200	OBSERV	ATIONS								
									CODE	lm!		FORCE	(mbs	, "	O.F.B	BULO	-	DEFINA										
									OT	SD	00	500	20	7 0	56	056	3	21										
			MESSENGE		CARD	5 500	TH (m)	١,	20"	ς.	,	SIGM			. vota	ME S	Δ O	SOI	UNO	O2 ml/l	PO4=	PT	DTA L-P	NO2-N	NO3-N	SI O4-SI	- 11	S
			TIME HR 1/10	NO.	TYPE	: DEF	rsa mus	'	6	1 ,	**	31G W	^-'	ANOM	ALY-X1	0' 0	K 10 ³	. AETO	OCITY	O2 INI/1	µg − 01	IJΙ.	µg - 01/1	νg - ο1/I	μg - ο1/1	µg - ot/l	pН	č
																												П
		,)	1	ST	n dr	000	, ,	349	328		261	12	0.01	903	9 0	000	1 14	617			1	,					
			16	a	085		000		349	328		261		001	,,,,	, ,			617									
					ST		010		250	328		262		001	803	9 0	019		577									
					OBS	5 0	010	(250	328	35	262	2.2						577									
					ST		020		070	328		263		001	659	8 0	036		499									
			0.0	1	085		020		070	328		263							499									
					ST		030		0025	329		265		001	537	7 0	052		458									
					OBS		030		0025	329		265		001	4.70	1 0	0.02		458									
					ST OBS	_	050		0078 0078	330		265	_	001	478	1 (082		438									
					085	-	060)114	330		266							423									
					ST		075		0104	331		266		001	384	5 0	118		431									
					OBS		075		104	331		266							431									
					ST	D 0	100	-C	065	332	3	267		001	323	7 0	152	14	455									
					OBS	. 0	100	-0	065	332	25	267	72					14	455									
					085		120		0081	332		267							451									
					ST		125		0075	332		267		001	284	3 0	184		455									
					OBS		125		0075	332		26							455									
					ST		150		0045	333		268		001	211	6 0	215		474									
					OBS		150		0045	333		268		001	.011	0 0	271		474 545									
					ST OBS		200		080	337		270		001	.011	0 0	~ / 1		545									
					ST	-	250		220	341		273		000	773	5 0	316		621									
					OBS		250		220	341		27				_			621									
					OBS		280		408	345		274							712									
					OBS	5 0	290		389	346		275							707									
					ST	-	300		390	346		275		000	1598	5 0	350		709									
					085		300		390	346		279							709									
					ST		400)441	349		276		000	1461	3 0	403		750									
					OBS		400)441	349		276		000		2 0			750									
					ST		500)439)439	349 349		277		000	461	3 0	449		766 766									
					0BS	-	600		1439	349		277		0.00	460	1 0	495		779									
					OBS		600		1429	349		27		000	,+0U	1 0	777		779									
					ST		700)424	349		27		000	464	3 0	541		793									
					085		700)424	349		27		000					793									
					089	-	780		0422	349		27	-						806									

REFE	ENCE	SHIP	LATITU	D.S.	LONGITUDE	INDCT#	ARSDEN	STATION TI	ME	YEAR	L	ORIGIN			DEPTH	MAX		WAVE	WEA	CODE			NDDC STATION	
CODE	ID. ND.	CODE	LATITU	1/10	* '1/10	N ON		MD DAY H	2,1/10	TEAR			TATIO		MOTTOM	S'MPL	'S DIRL	HGT PER S	CDD	TYPE AA			NUMBER	
31	8016	ΕV	4420	N	04839 W	1	49 48		70	1967	7	99			1910	15	1.2	2 3	04	013			0061	
							COLOR		IND	BAR	RD+	DRY	AP. °C WET	717	NO. OBS.	5 92	ECIAL VATIONS							
							CODE	(m)	FORCE	E (m)		8UL9	BUL	В	DBS. DEPTHS	Dogen								
							DT	SD 23	505	16	63	078	07	_	30	L			1	_				
		MESSENGR TIME 0	CAST ND.	CARD	DEPTH	im I	T °C	s °/	SIG	MA-T		ECIFIC VOLU	M E 07	₹ △ D DYN. M.		DCITY	02 ml/l	PD4-P ug = at/l	101AL-		ND3-N yg - al/I	SI D4-	-Si pH	c c
		HR 1/10				-					+-		+	x 10 ³	+			-	-		-			+
				ST	D 000	0	0272	3282	26	19	0	01832	0	0000	14	584		l	1	1	1	1	'	1 4
		170)	085	000		0272	32820		19		0.1766	,	0010		584								
				ST 08S			0179	3282 32820		27	U	001764	1	0018		545								
				ST	D 002	0	0130	3283	26	31	C	001725	0	0035		525								
		003	3	085			0130 0058	32830 3286		31	_	001660	Q	0052		525 495								
				ST 08S			0058	32860		37	C	,01000	,	0032		495								
				ST	D 005	0	-0134	3300	26	57	C	001475	9	0084		411								
				085 ST			-0134 -0139	33000 3311		57 65	(01389	9	0120		411								
				085	007	5	-0139	33108	26	65					14	414								
				ST			-0112	3319		71	C	001333	7	0154		432								
				08s		5	-0112 -0025	33190 3344		71	C	001175	7	0185		432								
				085	012	5	-0025	33440		88			0	0310		480								
				ST 089			0048	3360 33600		97	C	001090	8	0213		520								
				ST			0145	3388	27	14	C	00940	8	0264	14	576								
				OBS ST			0145	33880 3431		714 739		000712	1	0305		576								
				085			0263	34310		739		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	0-05		642								
				ST	D 030		0410	3462		750	(000626	3	0339		717								
				085			0410	34620 34650		750 749						717								
				085	031	0	0399	34650	27	753					14	714								
				089			0445	34761 34740		757 759						739								
				085			0410	34820		760					14	748								
				085			0432	34785		760	,	000E 30		0397		741								
				S1 085			0434	3480 34798		761 761	(000529	0	0391		746								
				\$1	D 050	0	0464	3497	27	771	(000447	2	0445		777								
				083			0464	34969 3495		771 771	(000455	0	0491		777								
				083	060	0	0450	34951	2	771					14	788								
				S1			0439	3498 34982		775 775	(000429	4	0535		800 800								
				083	-		0439	34982		774	(000443	3 2	0578		809								
				085	080	0 0	0421	34948		774		00044	2	0622		809								
				S1 083			0412	3495 34948		775 775	(000442	. 2	0623		+822 +822								
				S1	rD 100	0	0404	3494	2	776	(00044	79	0667	7 14	+835								
				089			0404			776 776		000455	5.5	0712		+835 +851								
				S1 085			0402	34939		776	,			0112		851								
				5	rD 120	0	0394	3494	2.	777	- 1	00045	25	0758	14	864								
				083			0394			777 777		00046	5	0803		4864 4881								
				083			0394	34942	2.	777			-		14	881								
				5			0390			778	(000460) 1	0850		4896 4896								
				083			0390			778 778		000462	24	0896		+890 4911								
				083			0385			778					14	4911								

ENCE ID.	SHIP	LATITU	IOE L	ONGITUDE	DRIFT	MARS	DEN	(ION T		YEAR	CRUISE	ORIGINA S1	TATI	ON		O D	MAX. DEPTH OF	OBSI	WAVE ERVATIONS	WEA- THER CODE	COMES		5	NODC TATION IUMSER	
NO.	EV	441	1/10 75N C	1/10	-	10°	1		23		1967	NO.	99°	<u>им</u> 78	BER	26	- 3 /	MPL'S	22	3 2	06	TYPE AMI			0062	
0010	1 - 1		, , , , ,	, , , , , , , ,	•1 1		WAT	ER	,	VIND	BAR	0-	AIR TEN		VI	N	o.	SPEC		- , ,						
							CODE	TRANS.	2114	FORCE	(mb	s1	BULB	BU	LB	DEF	IHS	03564	A 11011 3							
	MESSENGE		CARG			Т	DT	SD			20		078 C VOLUA		78 3 ≥ △ DYN,	3	SOUNG	. T		PO ₄ -P	TOTAL-P	NO2-N	ио₃-и	\$104-5		T
	MESSENGR TIME (HR 1/10	NO,	TYPE	OEPTH	(m.)	T	*c	S	*/	SIG	7-AN	ANGA	A A L Y - X T O	7	X 10	M.	VELOCI		O2 ml/s	yg = 01/1	µg - a1/1	μg - ol/1	yg - a1/I	yg - 01/		1
			STO	000	20 *		279	32	Q 1	7.6	26	00	1770.	2	000	0	1458	89						ĺ	1	ţ
	185	5	OBS	000	0.0	0	279	32	909	26	26				001		1458	89								
			08S	00	10	0	185		950	26	36 36		1669				1455	50								
	002	2	STO OBS	002			140	33 33	02 020	26	45 45	00	1586	В	003	3	1453	32								
			STE OBS	00:			010	33 33	11		60	00	1447	1	004	9	1447									
			08S 08S	00			001		210		68 73						1445									
			STO	00!	50	-0	001	33	27 270	26	73	00	1318	6	007	6	144	77								
			OBS OBS	00	60	-0	001	33	350	26	82						1445	59								
			OBS ST		75	-0	069	33	390 42	26	79 86	00	1192	7	010	8	145	74								
			0BS STI	00			0021		422 66		02	00	1046	7	013	6	1447									
			0BS 0BS	01			050		660 830		02						145									
			OBS	01	20		113	33	870 01	27	15	0.0	0880	ρ	016	٥	1454	48								
			OBS	01	25	(005	34	010	27	20	00	0000		0-0		145	90								
			0BS 0BS	01			149		020	27	24						146	68								
			STI OBS	01			356		31 310		30	0.0	0790	8	018	1	146									
			STI		00		455		64		46	00	0649	9	021	7	147									
			ST	0 02	50	0	549	34	90	2	'56 '56	00	0569	4	024	7	147	70								
			OBS OBS	02	60	(525	34	880	2	57						147	62								
			OBS OBS	02 02	81	(539	34	909 850	2	58 58						147	55								
			STI	03)512)512		89 888		59 59	00	0541	0	027	5	1470									
			OBS OBS	03	51	()441)509		910		69						147									
			ST	D 04	00	()480)480	34	93	2	66	00	0484	6	032	6	147	67								
			OBS OBS	04	20	(1456	34	919	2.	68	0.0	0/5/	2	^3~	, 1	147	60								
			ST OBS	05	00	()459)459	34	95	2	770		0456		037		147	75								
			ST: OBS	D 06)437)437		95 950		773 7 7 3	00	0440	14	041	. 8	147	_								
			STOBS	D 07)428)428	_	197 1969		775 775	00	0426	0	046	1	147									
			ST	D 08		()435)435	34	99	2	176 176	0.0	0430	15	050) 4	148 148									
			0BS	D 09	00	(0416	34	99	2	778	00	0417	4	054	7	148	24								
			08S ST		00	- (0416	34	+988 +99	2	778 780	0.0	0408	8 8	058	88	148 148	34								
			OBS ST		00		0401		+988 +98		780 780	00	0414	-2	062	29	148 148									
			OBS	11	00	-	0390	34	975	5 2	780 780	0.0	0416	9	06	71	148 148									
			OBS	12	00	(385	34	+975	5 2	780		0423		07:		148	61								
			ST OBS	13	00	4	0383	34	+98 +975	5 2	781 781						148	377								
			ST OBS		00		0380 0380		+98 +97:		781 781		0428		075	5	148	92								
			ST		00		0371		+98		782	0.0	0425	51	079	98	149	05								

REFERENCE	SHIP	LATITU	OF I	ONGITUDE	TE W	ARSDEN OUARE	STATION TI		YEAR		ATOR'S	T	OEPTH TO	MAX, DEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUD		5	NODC TATION	
CODE NO.	COOE	•	1/10	11/10	NDC1		MO OAY H				TATION		BOTTOM	OF S'MPL'S		MGT PER SEA	0000	TYPE AM	t	N	DWBEK	
318016	EV.	4414	5N C	14806 W	14				967		79		3365	15	22	3 2	04	0 3			0063	
						COLOR		SPEED	BARO		MP. ℃ WET	VIS.	NO. 085.	SPEC	CIAL							
						CODE	TRANS, OIR.	FORCE	(mbs)		8UL8	CODE	DEPTHS	OBSERV	AIIONS							
						DT	SD 27	S16	203	3 094	094	2	45									
	MESSENS TIME HR 1/1	Of NO.	CARO TYPE	OEPTH (m)	1 °C	s */	SIGM	A-1	SPECIFIC VOLU	ME 01	△ D N. M. 10 ³	SOL	DCITY	O ₂ ml/l	PO4-P ug = 01/1	fOTAL-P ug - oi/i	NO2-N µg - al/l	NO3-N	SI O4-Si yg - a1/l	рН	200
	1					0107	1217	1		001776												
	2(0.0	STI OBS	000		0497	3317 33170	262 262		001776	8 0	000		685 685								
			STI			0470	3315	262		001764	5 0	018		675								
			OBS	001		0470	33150	262						675								
	0 (12	ST0	002		0355	3321 33209	264 264		001609	4 0	035		629 629								
	0 (ST			0250	3316	264		001558	6 0	050		584								
			OBS	003	0	0250	33160	264	в				14	584								
			OBS	003		0205	33210 33380	265						566 599								
			OBS OBS	003		0275	33440	266 267						581								
			OBS	004	0	0290	33485	267						608								
			OBS	004		0246	33505	267						589								
			0BS ST[004		0280	33570 3355	267 267		001266	0 0	079		606 594								
			OBS	005		0252	33550	267		001200				594								
			OBS	006		0321	33680	268						627								
			OBS	006		0300	33670	268						619								
			STI OBS	007	5 5	0378 0378	3383 33831	269 269	90	001166	2 0	109		656 656								
			OBS	009	0	0409	34050	270						674								
			ST			0385	3410	27		000972	7 0	136		667								
			OBS OBS	010		0385 0269	34100 34110	271					14	667 620								
			STO			0321	3423	272		000820	1 0	15B		645								
			OBS	012		0321	34225	272				1		645								
			STI OBS	015		0440	3454 34540	274		000703	4 0	177		704 704								
			085	018		0439	34610	274						710								
			ST			0395	3461	275		000608	7 0	210		694								
			OBS OBS	020 021		0395	34610 34680	275						694 719								
			OBS	021		0409	34670	275						703								
			OBS	022	5	0450	34730	275	54				14	723								
			OBS OBS	023 024		0431	34710 34820	275						716 744								
			STI			0476	3480	275		000559	1 0	239		739								
			OBS	025	0	0476	34800	275	57				14	739								
			OBS	028		0380	34713	276		000505	7 0	1		702								
			STI OBS	030		0390	3475 34749	276 276		000508	1 0	266		710 710								
			OBS	037		0487	34950	276						765								
			OBS	038		0470	34929	276						759								
			OBS ST	039		0540	35039 3499	276		000490	7 0	316		792 784								
			0B\$	040		0520	34985	276		000470	, , 0	-10		784								
			OBS	042	0	0510	35007	276	9				14	784								
			STU			0480	3499	277		000450	6 0	363		784								
			OBS STI	050 060		0480 0451	34990 3499	277		000427	72 0	407		784 789								
			OBS	060		0451	34990	27		000721	_ 0	.01		789								

ER	ID.	SHIP	LATITU	DE LO	DNGITUDE THE	MARS SOU	ARE	STATION TI	YEAR	ORIGINATO	ION	OEPTH OEPTI TO OF S'MPL	H OBS	WAVE ERVATIONS HGT PER SEA	WEA- THER COOE	CLOUD CODES		STA	DDC TION MBER
†							WAT COLOR COOE	TRANS. DIR.	SPEED ME OR FORCE (m	ER DRY V	VIS.	OBS. OBSER	PECIAL RVATIONS	PO4-P	TOTAL-P		NO3-N		pH
		MESSENGR TIME HR 1/10	CAST NO.	CARD	DEPTH (m)	1	°C	s */	SIGMA-T	ANOMALY-X107	x 10 ³	VELOCITY	07	μg - σ1/I	µg - 01/1	ng - 61/[yg - at/l	hå = 01/1	
				STO	0700	C	0441	3498 34983 3497	2775 2775 2776	0004311	0450	14801							
				ST0 08S ST0	0800	(0428 0428 0410	34972 3497 3497 34970	2776 2777 2777	0004235	0536	14812							
				08S ST0 08S	1000	(0399 0399 0389	3497 34968 3495	2778 2778 2778	0004211	0578	14833 14846							
				08S ST0	1100	(0389	34954 3495 34954	2778 2779 2779	0004262	0663	14859	,						
				STO OBS	1300 1300	(0376 0376 0375	3495 34953 3496	2780 2780 2780	0004306	0706	14874 14890)						
				08S STI 08S	1400		0375 0370 0370	34960 3495 34954	2780	0004392	0793	14890 14905 14905	5						

CTRY ID. CODE	LATITUDE		ONGITUDE SOUTH	MARS		STATION (GM1	TIME	YEAR		ORIGINA		I	DEPTH	MAX. DEPTH		WAVE	WEA			-	NODC	٦
CODE NO. CODE		/10	1/10	10"		MO DAY	:	TEAR	CRUISE NO.		MOITA	1	OT MOTTOR	OF S'MPL'S		ERVATIONS	600	c			STATION	
318016 EV	4412	NC	4758 W	149	47	05 23	232	1967		998		+	2712				-	TIPE AN	1			+
		, .		٦٠٬٢	WA		WIND			IR TEM		4	3713	11	21	3 2	02	7 8	1		006	4
					COLOR		SPEED	BAR	U	$\overline{}$		VIS.	NO.	SPEC	JAL							
				-	CODE	Im)	FORC	E [mbs	s) B	ULB	BULB		DEPTHS	OBJEKY	A HONS							
						0.2	508	3 21	3 0	67	067 6	5	10									
MESSENGR TIME O	CAST	CARD	DEPTH (m)	1	*c	5 %.	110	MA-T		VOLUMI	₹ △	D	SOU	IND		PO ₄ -P	TOTAL-I	NO N	NO 11			T,
HR 1/10	NO.	TYPE	Del VIII (III)			' "	316	MA-I	ANOM	ALY-X107	DYN.	м. 0 ³	VELO		O2 ml/l	29 - at/l	101AL-1		NO3-N yg - al/I	\$1 O4-		000
											_		_			+		-	-	-	-	-
· ·		STD	0000	01	706	3356	2.6	30	0.01	7351	000	٠.	14	774		1			l			- 1
241	. (OBS	0000	0	706	33556		30			000	, ,	14									
		STD			836	3402	26	47	001	5700	001	17	148									
		STD			948	3442		61		4443	003	32	148									
		STD			043	3475		70		3564	004		149									
241	(STD OBS			180	3521		81	001	2609	007	72	149									
241		STD	0070		248 247	35397 3536		82	1	20	- 2 -		15(
241	(OBS	0075		235	35252		80	001	2807	010) 4	150									
		STD			227	3527		76	001	3159	013		150									
		STD			186	3534		90		1952	013		150	-								
241	(DBS	0141		159	35358			001	1952	016) (149									
		STD	0150		152	3535	26		001	1324	019	۵,6	149									
241	(DBS	0191	10	72	35246			~ ~ -		0-7		149									
		STD	0200	10	13	3517	27		0010	0345	045	1	149									
		STD	0250	07	765	3490	27	27	0000	8569	029		148									
241	C	DBS	0267		712	34856	27	31					148									
2/1	_	STD	0300		709	3494	27		000	7564	033	8	148	343								
241	C	085	0354		90	35040							148	345								
		STD	0400		26	3500	27			5144	040		148									
241		STD BS	0500		26	3495	27		000	364	046	4	148									
241		SID	0541 0600		99	34946	27						147									
		STD	0700		93	3498 3501	27 27		0004		051		148									
241		BS	0737		91	35020	27		0004	+/41	056	4	148									
_		STD	0800		82	3501	27		0004	728	061	1	148									
		STD	0900	04		3499	27		0004		065		148									
		STD	1000	04		3497	27		0004		070		148									
241	0	BS	1073	04	80.	34958	27		. , ,			-	148									
													0	. ,								

REFERENCE		_	F #	MARS																					
CTRY ID. CODE	LATITUDE	1	NGITUDE BO	SOU		STA	(GM	TIME	YEA	.R	CRUISE	STATE		4	DEPTH	MAX, DEPTH	OBS	WAVE	ZNOI	WEA				NOD	
	442554	_	1/10 -	10"	1*			HR.3/1	0		NO.	NUM		B	оттом	OF S'MPL'S		HGT PE		COD				STATIO	
1 310010 14	44255N	04	908 W	149	49		24		196	57	99	981		0	064	01	34	3 2		X6		8			
				ŀ	WA		+-	WIND		ARC		MP.		ris.	NO.	SPEC		1-1-	,	1 // 0	1 21	0	ı	006	55]
					COLOR	TRANS	DIR	FOI	R / '''	mbs		BUI	T C	206	OBS.	OBSERVA	TIONS								
							33	3 51	0 2	24	7 056	0.5	6 6	, †	04										
MESSENGE TIME OF HR 1/10 T	CAST CA	ARD PE	DEPTH (m)	Т	*c	S	٠/٠٠	SI	GMA-I		SPECIFIC VOL	JME	¥ △ DYN.	D	SOU) ml/l	PO4	_P	TOTA L-P	NO2-1	NO3-1	SI 04-	-ci	
112 7 10				-		-		+		+		-	X 10)3	VELO	CITY		₩8 - 0	01/1	μg - α1/l					н
' '		TD	0000	0.5	531	32	69	1 2	583	-	002176	. 1	000	.	100			1	- 1						
064			0000	0 9	531		687		583		002176	, ,	000	10	146										
064		TD	0010		30	32			583		002180	15	002	2	146										
004		TD	0011		30		680		583						146										
064	OE		0027		356 248	32	74 795		606		001964	1	004	3	146										
		TD	0030		209	32		_	619 624		001785	1.	001	,	145										
		TD	0050		61	33			651		001785		006 009		145										
064	08	S	0054	0.0	55	33	082		655		001732	,	009	4	145										

															_			
REFERENCE SHIP	LATIT		IGITUDE 3001	MARSDEN SQUARE	STATION TI	YEAR		ELON.	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	DBSE	WAVE ERVATIONS HGT PER SE	WEA- THER CODE	CLOUG CDDES		ST	ATION UMBER	
	+	1/10				74 1967	9982	,	0165	01	03	2 2	Х6	5 8		1 1	0066	
318016 EV	442	4 N 04	9005W	WATI		CINID.	A IR TEMP		NO.	1	,	' '	1					
				COLOR		SPEED MET	0-	VET COD	200	DBSERVA								
				CDDE	TRANS. DIR.	FORCE (m)		ULB	DELIHZ									
					03	510 25	54 044 ()44 6	06									
.45555	NGR CAST	CARD					SPECIFIC VOLUME	₹ ∆ D		UND	D 2 ml/l	PO4-P	TOTAL-P		NO3-N	\$1 O4-\$i	ρН	S
TIM	E U NO.	TYPE	DEPTH (m)	T °C	s */	SIGMA=T	ANOMALY-X107	x 10 ³	. AEL	OCITY		μg + σt/l	μg = e1/l	yg - 01/1	μg - α1/l	µg ≈ 01/1		1
HR 1	/10																1	
		STD	0000	0356	3277	2608	0019433	0000) 14	620								
			0000	0356	32766				14	+620								
	74	OBS STO	0010	0275	3279	2617	0018575	0019	9 14	+587								
		STD	0020	0198	3283	2626	0017698	003		+555								
1	74	085	0025	0162	32844	2630				+540								
· ·	, , ,	STD	0030	0117	3287	2635	0016866			+521								
		STD	0050	-0003	3295	2648	0015619	800		+471								
	74	OBS	0051	-0006	32951	2648		010		4470								
		STD	0075	-0010	3296	2648	0015533	012	-	4472								
	74	OBS	0076	-0011	32956		0015370	016		4472 4462								
		STD	0100	-0042	3297	2651 2652	0015278	016		4461								
	74	085	0102	-0045	32979 3311	2663	0014070	020		4453								
		STD	0125	-0074 -0077	33127		0014010	0~0		4452								
	074	OBS	0127	-0077	22161	2007												

REFERI CTRY CODE	ID. COD		JDE 1/10		SITUDE	DRIFT	MARS SQU	ARE	STAT		F1ME	YE A	R	ORIG CRUISE NO.	OTAN ITATS MUN	DN	-	DEPTH TO BOTTOM	DE	AX. PTH OF			VE ATIONS		WEA THER COD	. 1	CODES			ST.	ODC ATION IMBER	
2.10	_	442		048	3525W	\Box	149	1			085		6.7	9	983			0818	T	08	34	2	3		Х2		7 8				067	
1 2 16	3016 EV	1 442	2) 14	040) J Z J 11	1 1	147	WAI			WIND	,		A 19 1	EMP.			NO.	_			1			•							
							}	COLDR	TRANS.	DIR	SPE	EO A	A ETE			ET C	VIS.	OBS.	mes	SPECIA												
								CODE	fm1	Dik	FOR	CE _	(mbs	BULB	91	ILB	_	DEFINS	1													
										02	50	7	26	8 044	0	28	7	10														_
		I OF NO.	CAR		DEPTH	(m j	τ	°C	s	۰/	SI	GMA-	т	SPECIFIC VO		₹ Z DYN X	. M.		UND	y C	2 ml/l		04-2		DTAL-		02-N 2 - at/l	NO3-		SLD4-Si pg - ot/I	рΗ	
	HR 1	/10	+	-			-									_								T		Π						
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	(85	ОВ	S	002	5	0	234	32	323	3 2	623							+57													
			5	TD	003	0	0	155	32			630		00173		-	56		+53													
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31801e		4420	1/10) N (1/10 ¹²	10" 1"	MO DAY HR		1967	ND.	9984	ABER	+	158	S'MPL	1	HGT PER SE	A CDDI	TYPE AM		N	UMBER	
					COLOR	ER WI	ND	BARC	AIR	TEMP.	°C v	15.	ND. OBS.	SPI	ECIAL	2141	X2	7 8	1		0068	
					CODE	Im) Dir.	FORCE 500	(mbs) BUL	B B	39 7	4	EPTHS 12	OBZER	ZNOITAV							
	MESSENGR TIME	CAST	CARD	DEPTH (m1	1 %	s */	SIGA		SPECIFIC V	DLUME	₹ ∆ DYN.		SDU		D2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI D4-Si	рН	s
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REFERENCE CTRY ID.	SHIP																					
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	CODE	•	1/10	1/10 ° Z	SOUARE 10" 1"	(G MT)	1/10		CRUISE ND.	STAT	ION	ВО	TO	OF S*MPL*	DBSE	RVATIONS IGT PER SE	THER	TYPE AM	ī	IS N	UMBER	
318016	CODE	4417	1/10		10° 1° 149 48	(GMT) MO DAY HR. 05 24 1.	1/10 2 3 :	1967 BARO	CRUISE ND.	STAT NUM 9985 TEMP.	ION BER	30	72 NO.	OF S'MPL"	DBSE S DIR. H	RVATIONS	THER	CODES		IS N	TATION	
	CODE	•	1/10	1/10 ==	10° 1° 149 48	MO DAY HR. 05 24 1 ER WII TRANS. DIR.	1/10 23 ND SPEED OR FORCE	BARO METE (mbs)	CRUISE ND.	STAT NUM 9985 TEMP.	C VI	30 5. DE DE	TO TTOM 072 NO. OBS. EPTHS	OF S'MPL"	DBSE S DIR. H	RVATIONS IGT PER SE	THER	TYPE AM		IS N	UMBER	
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CTRY ID. COT		IDE LON	GITUDE ANDCE	SQUARE	(GMT)	YEAR	CHUISE		TION	TO BOTTOM	OF			CODE				UMBER
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	138	085	0024	0355	33237	2645	1	. 7. 2	005		630							
		STD	0030	0211	3323	2657		4762	005	~	463							
		STD	0050	-0029	3321	2669	001	3557	007		463							
	138	0B5	0050	-0029	33205	2669					563							
	138	085	0074	0174	33527	2683	001	2234	011		563							
		STD	0075	0174	3353 33688	2684 2696	001	2234	OTI		1569							
	138	085	0099	0173 0179	3370	2697	001	0989	013		572							
		STD	0100	0305	3402	2712		9600	016		635							
		STD	0125	0390	34245	2722	000	7000	010		679							
	138	OBS	0148	0390	3426	2723	000	8658	018		681							
	120	ST0 085	0150 T0197	0474	34539	2736	000	0070	010		+726							
	138	510	0200	0479	3456	2737	000	7363	022		+729							
		STD	0250	0537	3477	2747		6526	026		+763							
	138	085	0294	0544	34870	2754					4775							
	100	STO	0300	0534	3486	2755	000	5882	029	4 14	+772							
	138	085	T0387	0424	34806	2763	,			14	4740							
	100	STD	0400	0428	3482	2763	000	5064	034	8 14	4744							
		STD	0500	0450	3491	2768		4748	039	7 14	4771							
	138	085	T0577	0455	34947	2771				14	4786							
	150	STD	0600	0450	3495	2771	000	4579	044	4 14	4788							
		STD	0700	0430	3495	2773	000	4461	048	9 14	4796							
	138	085	T0773	0417	34944	2775				14	4803							
		510	0800	0413	3494	2775	000	4396	053	3 14	4805							
		STD	0900	0399	3494	2776		4325			4816							
		STD	1000	0387	3494	2777	000	4273	062	0 14	4828							
	138	085	1074	0381	34935	2778				14	4838							

REFERENCE	_			- #	MARSD		STATION				DRIGINA	ATOR'S		DEPTH	MAX.	ORS	WAVE SERVATIONS	WEA-	CLOUD		ST.	ODC	
CTRY ID.	CODE	LATITUD	E L	ONGITUDE STUTIONO	SOUAR		IG M		YEAR	CRUISE NO.		TATION	1	BOTTON	S'MPL"		HGT PER SE	CODE	TYPE AM1		N1	JAABER	
CODE NO.	CODE	•	1/10	1/10	10*	1" M	O DAY	HR.1/10		+	-		-	0 - 1 0	-	1		x2	68			0071	
31801	6 EV	4412	N C	14759 W	149	47 0	5 24	159	1967		991		, 1	3749	05	34	2 2	12	1 0 10	ı	1 (,0,1	
	-1					WATE	R	WIND	BAR	0-	AIR TEA		vis.	NO. OBS.		CIAL							
							RANS. DI		7-1		DRY	WET	CODE	DEPTHS	OBSERV	ATIONS							
					- 1	DODE		FOR		-	\rightarrow	044	6	10	-								
							3	6 51	6 28	34 (050	_	_	10									-
	MESSENO	RCAST	CARD		1 .	*c	s °/.	, e1	GMA-T	SPECIFI	c volu		AN, M		DAND	0 2 m1/	PO4-P	TOTAL-P	NO2-N pg - al/l	NO3-N va - ot/l	SI O4→Si µg - o1/1	рΗ	ć
	TIME	약 NO.	TYPE	DEPTH (m)	Ι΄.	_	, ,	. -"		ANDA	AALY-XI		X 10 ³	VEC	DCITY		yg ≈ o1/l	pg - diyi	pg - 0,7 t	Pg - 001			+
	HR 1/1	1																					11
	1	1 [ST	0000	13	374	3541	' 2	658	00	1468	7 0	000	15	5038								
	15	. 0	085	0000		374	3541		658						5038								
	1.	7 7	ST			375	3541		657	00	1473	8 0	015		5040								
	15	. 0	OBS	0018		376	3541	0 2	657						042								
		, ,	ST	0020	13	375	3544		660		1453	_	029		5042								
			ST	0030	13	367	3555		670	0.0	1361	3 0	1043		5043								
	15	9	085	0037	13	362	3556		672						5042								
			ST	0050	12	267	3540		679	00	1282	5 0	070		5011								
	1	59	085	0056	12	241	3535		680						5002								
			ST	0 0075	12	234	3536		682	0.0	1257	1 0	102		5003								
	1.	59	085			234	3536		682				. 1		5003								
			ST			226	3534		682	0.0	1262	. /	133		5004								
	1	59	085			215	3533		683		1237	, ,	164		5000								
			ST			201	3532		685		1196		0195		4992								
			51			167	3530		2691	00	1170) _ \	J = 7 .		4990								
	1	59	085			161 091	3526		701	00	1102	21 (1252		4973								
			ST		1 (091	3516		101	00	1102		,-,.		. , , -								
	1	59	085 ST		11	006	3504		2699	0.0	1129	95 (0308	3 1	4948								
			5 T			911	3474		2692		1205		366		4917								
	1	59	085		0		346																
	1	27	ST		0	691	3476		2726	00	0884	43	047	-	4849								
	1	59	085		0	479	3483	31	2759					1	4779								
			,																			- 4	0.5

REFERENCE SHIP LATITU	DE LOI	DOUTE STUTION	MARSDEN	STATION TI		DRIGINA		DEPTH DEP		WAVE	WEA-	CLDUD			NDDC]
CODE NO. CDDE .	1/10			MD DAY H	YEAR	CRUISE S'	TATION UMBER	POTTON DI	F	RVATIONS	0000	CODES		S	TATION	
318016 EV 4410					77 1967	_		I S M P		HGT PER S	EA .	ITPL AM	Ť		OWIDER	-
1	,, ,		WAT		VIND	99 8		3804 1	1 34	3 2	X 2	6 8			0072	1
					SPEED MAT	D-	VIS.		PECIAL							
			COLOR CODE	Im) DIR.	FORCE (mb		BULB COD	DEPTHS OBSE	RVATIONS							
				36	S14 28	1 072	067 7	11								
MESSENGR CAST	CARD	DEPTH (m)	ī °c			SPECIFIC VOLUM	AE SAD	SOUND	Τ	PO ₄ -P				4		1,
HR 1/10 ND.	TYPE	DEPIN (m)	1 C	s */	SIGMA-T	ANOMALY-X10	7 DYN. N X 10 ³	VELDCITY	O ₂ ml/I	JQ - 01/1	101AL-P ug - 01/1	NO ₂ -N μg - αt/l	ND3-N yg - o1/l	SI O4-Si \10 - Q4	pН	c
							+		_					-	_	+H
	STD	0000	1360	3539	2659	0014572	2 0000	15033		l	l	1			I	11
177	085	0000	1360	35388	2659	002.27.	. 0000	15033								
	STD	0010	1355	3539	2660	0014506	0015									
	STD	0020	1350	3539	2661	0014432	0029	15034								
	STD	0030	1346	3539	2662	0014366	0043									
	STD	0050	1336	3539	2664	0014226	0072									
177	OBS	0050	1336	35390	2664			15034								
177	OBS	0074	1358	35547	2672			15047								
	STD	0075 0100	1355 1299	3554 3549	2672	0013572										
177	OBS	0100	1299	35485	2679 2679	0012949	0140									
	STD	0125	1258	3541	2681	0012781	. 0172	15031 15020								
177	OBS	0149	1227	35380	2685	0012761	. 0112	15013								
	STD	0150	1227	3538	2685	0012475	0204									
177	OBS	0199	1191	35438	2696	0011.72	0-0-	15010								
	STD	0200	1188	3543	2696	0011519	0264									
	STD	0250	1031	3527	2713	0010026										
	STD	0300	0896	3512	2724	0008995	0365	14916								
177	OBS	T0300	0896	35123	2724			14916								
177	STD	0400	0691	3488	2736	0007932	0450									
111	OBS STD	0400 0500	0691	34878	2736			14851								
	STD	0600	0565 0481	3491 3494	2755	0006168										
177	OBS	0601	0481	34939	2767 2767	0005011	0576									
	STD	0700	0459	3494	2770	0004850	0625	14800 14808								
	STD	0800	0438	3494	2772	0004701		14808								
177	085	T0802	0438	34941	2772	0007101	0073	14816								
	STD	0900	0424	3495	2774	0004582	0720									
	STD	1000	0415	3495	2775	0004532		14840								
	STD	1100	0410	3496	2776	0004522		14854								
177	OBS	1104	0410	34957	2776			14855								

CODE NO. CODE	ATITUDE 1/10	LONGI 0474	17 10	F 00 5	ARSDEN QUARE	MD		TIME) HR.1/10	YEAR 1967	CRUISE NO.		TIDN	-	DEPTH TO BDTTOM	MAX DEPTH OF S'MPL	O8	WAVE ISERVATII	DNS	WEA- THER CODE	TYPE	DUD DDES		5	NODC TATION IUMBER	
1 1 1 1				1 -	WA			WIND		1 1	IR TEMP		T	NO.	1 -] - -	1	10.	1 '	10		1	00151	
					COLDR	TRAN:	S. DIR	SPEE OR FORG	74.4	ER D	RY	W E T BULB	COOE	One		VATIONS									
							28	520	0 0 1	4 0	44	044	2	09											
MESSENGR OF THE 1/10	AST CAI		DEPTH (r	n1	T ℃	5	٠/	510	GMA-T		VOLUMI	. D	△ D YN. M. X 10 ³		UND	O 2 ml/	PO4		TOTAL-P	NO:		ND3→N µg - at/i	S1 Ω4-Si μg - αt/l		SCC
		TD	0000		0169		274		621	001	8173	0	000		538										
131	08	-	0000		0169		741		621						538										
131	0B	TD S	0010		0164		275 2747		622 622	001	8096	0	018		537										
101		TD .	0020		0143		277	_	625	001	7787	0	036		530										
		TD	0030		0122		79		628		7482		054		523										
131	08		0030		0122		793		628					14	523										
131	ОВ		004		-0032		911		646						456										
131	S 0B	TD	0050		-0056		295		650	001	5398	0	087		447										
131		TD TD	007		-0062 -0135		2961 305		651 661	001	4355	0	124		445										
131	08		007		-0137		3056		56l	001	4300	U	124		415										
		TD	0100		-0100		322		673	001	3147	0	158		438										
131	08		010		-0095		3235		674						441										
		TD	0125		-0038		337		683		2232		190		473										
		TD	0150		-0003		345		688	001	1779	0	220		495										
131	OB		0153		-0001		3458		688						496										
131	OB	S	0169)	0003	33	472	2 (589					14	501										

REFERENC	E			Prof.	≝ MARS	DEN	STAT	ON TI			DRIGIT	OTA	R*S	DEPTH	DEPT		WAVE ERVATIONS	WEA-	CLOUD		4	ATION	
CTRY ID.	CODE	LATITUE		NGITUDE	SOU SOU			GMT)		EAR		STATI		BOTTO	0.5		HGT PER SI	CODE	TYPE AM	1		UMBER	
CODE NO	0.		1/10	1/10	= 10*	-		_	R.1/10				-	7	_		 					207/	
31801	16 EV	4618	N 0	4740 W	149					967		90	-	0174	02	2 24	5 3	04	7 8	1		0074	
						WAT			SPEED	BARD		_	- VI	NO.		ECIAL							
						COLOR	TRANS.	DIR	OR	METE!		BU		DEPTH	s DBSER	VATIONS							
						0001		28		01	4 050	10	44 4	07	+-								
		-						20	520	01.	4 000	1 0				T ——	1						Τ.
	MESSENGR	CAST	CARD	DEPTH (m	, т	*C	s	٠/	SIGMA	A -T	SPECIFIC VOL		Ž ∆ I DYN.	W	LOCITY	D2 m1/1	PO4-P µg - o1/1	TOTAL-P		NO3-N	\$1 O4-\$i yg = a1/1	pН	OC.
	HR 1/10	NO.	TYPE								AIROBIACI-		x 10	V .	LOCIII		pg - 0171	pg - 0771	py - 001	pg - 01/1	20		H
										Ì									ĺ				
	0.	, ,	STD	0000) 0	167	32	75	262	2	00181	15	000	-	4537								
	13	8	085	0000	0	167		747	262						4537								
			STD	0010		088	32		262		00175		001	-	4504								
			STD			025	32		263		00170	56	003	-	4477								
	13	8	085	0024		1004		789	263				000		4468								
			STO			018	32		263		00165		005		4459 4439								
			STD	0050		073	32	92 919	264 264		00155	12	000		4439								
	13		OBS	0050		073 104		071	266						4430								
	13	8	OBS	0074		104	33		266		00142	23	012		4431								
	13	0	\$TD 08S	0099		074		237	267		00142		0.42	-	4451								
	13	0	SID			072	33		267		00130	96	015	5 1	4452								
			STO			028	33		268		00122	01	018	7 1	4478								
	13	А	085	0148		0007	_	438	268						4492								
	10	0	STD			0006	33		268		00118	55	021	7 1	4493								
	13	8	085	0164		0003	33	439	268	37				1	4497								

REFERENCE SHIP	ATITUGE LO	DOCTR 30011900	MARSDEN	STATION TH	ME	ORIGINA CRUISE ST	TOR'S ATION	DEPTH DEPT	H OBSE	WAVE ERVATIONS	WEA-	CLOUD		ST	ODC	
	1/10	1/10	10° 1° /	MO DAY H	R.1/10	NO. NI	J M BER	BOTTOM S'MP	L*S DIR.	HGT PER SE	CODE	TYPE AM		N	JMBER	
318016 EV 4	618 N 04	1738 W	149 67 (05 30 1	45 1967	999	1	0183 02	2 24	5 3	X 4	7 8	1	(075	
	·		WAT	ER W	INO BAR		VIS.		PECIAL							
			COLOR	TRANS. DIR.	OR (mb		BULB COD	DEPTHS DESE	RVATIONS							
				28	520 99	0 050	044 6	07								
MESSENGA TIME OF	CAST CARD	DEPTH (m)	T *C	s */	SIGMA-T	SPECIFIC VOLUM	E SAD	SOUNO	O 2 ml/l	PO 4-P ug - ot/t	TOTAL-P µg = a1/l	NO2-N µg - 01/1	NO3-N vg - a1/1	SI 04-Si ug - 01/I	рН	S
HR 1/10	_	1		-					_							\top
1 1	I STD	0000		3273	1	1	1	I	ı			,	'			
145	085	0000	01720		2620Q											
	STD	0010		3276												
	STO	0020	0027	3280	2626			14484								
145	OBS STD	0025 0030	0037 -0014	32830 3287	2636 2642	0016188		14462								
	STD	0050	-0144	3301	2658	0014655		14406								
145	085	0051	-0148	33020	2659			14405								
	STD	0075	-0145	3312	2667	0013791		14412								
145	OBS	0076	-0144	33126	2667			14412								
	STD	0100	-0098	3326	2676	0012848	3	14440								
145	085	0102 0125	-0094 -0062	33270 3338	2677 2685	0012054		14462								
	STD STD		-0006	3345	2688	001203		14493								
145	085	T0152	0000	33455	2688	0010		14497								
145	OBS	0168	0050	33478	2687			14522								

CTRY ID.	CODE	LATITU	1/10	LONGITUDE	DRIFT	MARSDE SOUARE	N E	TATION	TIME HR.1/	YEA	A.R		OTAT	ON	BOTT	o GEF	TH OB	NOITA		WEA- THER CODE	CLOUD COGE!	5	51	NODC TATION UMBER	
31801	6 EV	4616		04738 V			57 0	5 30	152	19	67	99	92		02		2 24	PER 2	SEM.	Х4	7 8	-		0076	
							WATER DLOR TR	-	∖ી ૮	EEO /	BARO METER (mbs)	R DRY	MP. T	ET COI	DEP	5. 0000	PECIAL RVATIONS								
								21	3 52	22	030	050	04	44 6	0	7									
	MESSENGI TIME HR 1/10	및 NO.	CAR TYP		(m)	T *C	:	5 %.	S	IGMA-	-T	SPECIFIC VOLU		₹ △ 0 DYN. / X 10 ³	۷. ,	SOUND	02 ml/	O4-P			NO2-N ug = at/l	NO3-N 1/10 - 84	51 O45i µg - al/l	рН	
			S1	000 Q1	0	017	73	3274	2	2620		001823	8	000	0	14540									
	15	2	089			017		32736	-	2620						14540									
				LD 001		005		3280		2633		001707		001		14491									
		_	S1			-003		3286		2642		001619	4	003		14452									
	15	2	089			-007		32900	_	2647						14434									
			S1			-009		3293		2650		001543		005	-	14426									
	3.5	2	SI			-014		3305		2661		001433	5	800		14405									
	15	2	085	5 00 5 FD 00 7		-015 -013		3306: 3314		2662		001366	0	011		14404									
	15	2	089			-013		3315)		2668 2669		001366	0	011		14416									
	15	۷.	SI			-013		3330		2679		001261		014		14419									
	15	2	085			-006		3332:		2681		001261	4	014		14450 14455									
		-	S1			-002		3341		2686		001199	q	017		14481									
			S1			001		3351		2692		001141		020		14504									
	15	2	089			002		33524		2693		002171	-	020		14508									
	15		085			004		3362		700						14524									

CTRY ID.	CODE	LATITU	DE L	ONGITUDE IN	MARSOEN SOUARE	STATION TIN (GMT)	YEAR	ORIGINATO	ION	DEPTH DEPT TO OF BOTTOM S'MPI	H O8S	WAVE ERVATIONS	CODE	CODES		2.	NODC TATION UMBER	
31801	6 EV	4612	N 0	4720 W	WA		98 1967	ER ORY V			ECIAL VATIONS	7 2	x 2	7 8			0077	
						34	S24 07	8 028 0	28 6	09								
	MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	τ ℃	s */.,	SIGMA-T	SPECIFIC VOLUME ANOMALY-X107	₹ △ D 0YN, M x 10 ³	VELOCITY	02 ml/l	PO4-P µg + ol/I	TOTA L-? ug - ot/l		NO ₃ -N γο - οι/Ι	51 O4-5i 1/10 + gu	рН	SCC
																		\Box
			STD		0102	3282	2631	0017175	0000	14509								
	198	3	085	0000	0102	32818	2631			14509								
			STD	0010	0093 0084	3293 3301	2641	0016269	0017									
	198	a .	085	0025	0079	33049	2648 2651	0015607	0033	14507 14506								
	- / (,	STD	0030	0051	3306	2654	0015048	0048									
			STD	0050	-0029	3315	2665	0013978	0077	14462								
	198	3	085	0051	-0032	33159	2666			14461								
		_	STD	0075	-0053	3334	2681	0012416	0110									
	198	3	OBS	0077	-0055	33358	2683			14457								
	100		STD	0100	0040	3361	2699	0010792	0139									
	198	3	08S ST0	0103 0125	0051 0124	33641 3389	2700 2716	0009174	0164	14514								
			STD		0124	3413	2730	0007174	0185									
			STO	0200	0306	3450	2750	0006047	0220	14655								
	198	3	085	T0204	0313	34520	2751	0000047	0-20	14659								
			STD	0250	0354	3465	2758	0005418	0249									
			STD	0300	0388	3476	2763	0004984	0275	14710								
	198	3	085	0306	0391	34766	2763			14712								
	100		STD	0400	0417	3485	2767	0004718	0353	14740								
	198	5	085	T0407	0418	34852	2767		- 2 = -	14741								
			ST0	0500 0600	0410 0401	3487 3489	2769	0004602	0370									
	198	3	085	T0642	0397	34893	2772 2773	0004464	0415	14766 14772								

																			_	MA	v											
REFERENCE	T					- E	MARSDE		STAT	DN 1	IME	ur.				ATOR'S		DEP		DEPT	H.	085	WAV ERVA			WEA-	CLD				NODO	N
CTRY ID.	CODE	LATITUE	DE	LONGITU	DE	5 5 L	SQUAR			GMT1		YEA	r.K	CRUISE NO.		TATION		BOTT	1000	OF S'MP		D1R	lugt s	ER SE		ODE	TYPE	A M.T			NUMBE	R
CODE NO.	10001		1/10		1/10	+	10"				HR,1/10		-	110.	_				\neg	-				_		u 1	6	2			007	
31801	6 EV	4614	N	04716	W	1	149 (-	208	19	67		99			06		0	6	32	3	۷	- 1	X 1	0	וכ		1	007	01
							L	WAT	ER .	_	WIND		BARO	- ا	IR TEA		vis.	NO BO			PECIA											
								DLOR	TRANS.	DIR	SPEE	: l'	(mbs)		DRY ULB	BULB	CODE	DEP	THS	DBSE	RVAI	DNS										
							F	-		32		-	10		28	022	7	0	9													
						\neg			_		131	7	10.	SPECIFIC			ε Δ D	1	SDU	IND	Τ.		PC)P	101/	AL-P	NO ₂ -	-N	NO3-N	SI 04-	51	н
		of NO.	CARD		PTH &	m)	1 1	С	2	٠/	SI	GMA-	-T		ALY-X1	67	X 10 ³	' ·	VELO		0	2 ml/l	n8	- 01/1	µ9 ⋅	at/l	и д – о	1/1	1\10 - gu	μg - σ1.	/1	``
	HR 1/10					-			-		+	_	-			\neg																
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	20	0	51		003			20	33			655		00	496	9	0048	3	14	480)											
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													0.810	INATO	R*S	DEPTH	MAX		WA		WI		CLDUD			NODC	
REFER	ENCE	91H2	LATITU	0.	LDN	GITUDE		I ARÉ	SIA	ION T	IME	YEAR	CRUISE	STAT		TD	OF			A TIONS	TH CD	D.F.	CODES		1	NUMBE	
CODE	ID.	CODE		1/10	20.1	1/10	2 10°	10	MO	DAY	HR,1/10		NO.	NUM	BER	801104	N S.W br	'S DIR.	HG	PER SI	EA	-	TYPE A M	1			-
-					04	724 W	14	9 67	05	31	219	1967		995		0421	04	31	_ 3	2	X	1	7 7		- 1	007	91
31	8016	EV	4614	⊢ N ∣	04	724 W	114		TER	-	WIND	BARC	A1R	TEMP.	°C VIS	NO.	92	ECIAL									
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								CDDE	tm1	Diki	FORC	(mbs			J L B	-	-		-								
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		MESSEN	CAST	CA		DEPTH 6	m)	T °C	2	-/	SIG	MA-T	SPECIFIC V		₹ Δ 0 DYN. 7 x 10 ³	M. 115	LOCITY	O ₂ ml.		PO4-P 10 + 01/1	TOTAL		NO2-N ug - qt/l	NO3-N pg - at/			н
		HR 1/1	of ND.	TY	PE						-				X 10	+		-	+		-	-					
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		2	19		BS	007	-	-0054	_	313.		665	0013	983	011	7 1	4450										
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		2	19		BS STD	010	_	-0116		328		679	0012	635	015	0 1	4432										
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					STD	015		019		396		736	0007	163	019	-	4411										
		2	19		BS	019		-025		436		769			- 15		4395										
		_	- /		STD	020	0 .	-0269		440		773	0003		042		4391										
					STD	025	-	-033		460		790	0001	933	024		4362										
		2	19	0	BS	028		-0369		472		799	0000	(03	044		. 4362 [436]										
					STD	030		-037		475		802	0000	1093	022		4360										
		2	19		ВS	038		-041		487		812	-0000	301	024		14362										
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		7	219	0	85	040	06	-041	2 3	487	5 4	812															

REFERENCE	SHIP	LATITU	105	100	CITILOT E	MARS SQU		STAT	ON T	1ME	WF 1 0		ORIGIN	ATOR'S		GEP		MAX. OEPTH		WAV		WE		CLOUI				NOOC
COOE NO.	COOF	·	1/10	LUN	GITUOE E						YEAR			TATIO		BOTT	1014	OF		SERVA		TH CO	or L	COOE				TATION UMBER
						10°	1			IR,1/10		+			K			S'MPL'S	DIR.	HGT 1	ER SE	4 00	-	TYPE AA	A.T			OMBER
31/801	6 EV	4609	9 N	04	724 W	149			_	231	196	7	99			078	86	06	32	3 3	2	X	1	3 3				0080
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							COLOR	TRANS.	OIR.	OR	17.	TER bs)	ORY BULB	WET	CODE	OB! DEPT		OBSERV	ATIONS									
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	MESSENGE					Γ'			20	1	, , ,	Т			ξ Δ D	T							_			Т		
	TIME	T NO.	CA TY		OEPTH (m)	T	°C	5	°/	SIG	MA-T		ANOMALY-X1		DYN. M		VELOC		02 ml/		4-P	FOTAL-		102-N	NO3-		SI O4~Si	ρН
	HR 1/10	-		-				-	_	-		+		+	X3					P 9	0171	yg = 61		g = 6171	hð + a	1/1	hð - ai\ i	
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				TO	0010		122	329			37		001667		0017		145	_										
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	22	_		TD	0030		119	330			46		001581	4	0050		145 145											
				TD	0050		069	332			65		001301		0079		145											
	23	1	08	5	0050		069	332			65		001570	_	, , ,		145											
	23	1	08	S	0074	-0	069	333	323	26	81						144											
			S	TD	0075	-0	065	333	3	26	81		001244	6 1	112	1	144	52										
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	23	1	QB		0100		034	336			99						145											
				TD	0125		133	339			17		000908		166		145											
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			_	TD	0400		392	348			68		000301		325		147 147											
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				TD	0500	-	394	348			72		000434	3 (370		147											
				TD	0600		397	349			73		000431		413		147											
	23	1	08	S	0648	0	398	349			73						147											

REFERENCE SHIP CODE CO	1/10	AGITUDE 100 SC SC SC SC SC SC SC SC SC SC SC SC SC	_	ER W	YEAR	999	TION MBER	0174 (OF OBSE	WAVE RVATIONS HGT PER SE 2 4	WEA- THER CODE	CLOUD COOES TYPE AM		57 N1	NOOC PATION UMBER 0081	
MESSENGR CAST TIME OF NO. HR 1/10	CARO TYPE	OEPTH (m)	т °с	5 */**	SIGMA-T	SPECIFIC VOLUME ANOMALY—X107	₹ △ 0 0YN. W X 10 ³	VELOCITY		PO4-P µg - at/l	TOTAL-P pg = at/I	NO2~N ug = al/l	NO3-N yg - at/l	51 O4-Si µg = at/l	рΗ	200
232	STD OBS STD STD OBS	0000 0010 0020	0186 0186 0166 0147 0137	3271 32709 3271 3273 32755	2617 2617 2619 2622 2624	0018530 0018393 0018115	0000	1454 1453	5 8 1	1						
232 232	STD STD 08S STD 08S	0050 - 0051 - 0075 - 0076 -	0078 0091 0097 0157 0158	3281 3299 32997 3307 33071	2632 2654 2655 2663 2663	0017098 0014966 0014143	0054	1443 1442 1440 1440	1 9 5 5							
232	STD 08S STD STD 08S	0102 - 0125 - 0150 -	0122 0119 0076 0019 0002	3318 33193 3331 3343 33470	2671 2672 2680 2687 2689	0013381 0012534 0011853	0157	1442	9 5 7							

								MA	v 1		1	T 010110			
REFERENCE SHIP			MARSOEN	STATION TIME	YEAR	ORIGINATO		TO DEP	TH ORSE	WAVE RVATIONS	WEA-	CLOUG		57	ODC
CTRY 10. COOE LATER		. 07		MO DAY HR.		NO. NUN		BOTTOM S'MF		HGT PER SEA	CODE	TYPE AM	ī	NI	JAABER
318016 EV 4650			49 67 (06 05 0	06 1967	9998		0201 0	2 25	2 2	XO	10		1 (0082
31 001d E4 4030	14 0 .	,,,,,,,	WATI		NO BAR	AIR TEMP.	°C vis.	NO. S	PECIAL						
			COLOR	TRANS. DIR.	OR (mbs		ET CODE		RVATIONS						
			0001		POICE		39 7	07							
				[24]	S11 26									(10. 6)	
MESSENGE CAST	CARD	DEPTH (m)	r *c	5 %.	SIGMA-T	SPECIFIC VOLUME ANDMALT-X107	₹ △ 0 0YN. M x 10 ³	. VEFOCITA	02 ml/l	PO4=P yg = 01/I	10TA L-P 1/10 = gu	NO2-N pg - at/l	NO3-N µg - ot/1	\$1 O4-\$1 µg = 01/L	pН
HR 1/10	1175						X 10°			+					
						0030300	0000	 14556	1	1 1			I	1	1
	STD	0000	0214	3263 32628	2609 2609	0019339	0000	14556							
006	08S STD	0000	0166	3287	2631	0017175	0018								
	STD	0020	0123	3306	2650	0015458	0035	14525	;						
006	OBS	0025	0104	33128	2656			14518							
	STD	0030	0093	3315	2659	0014591	0050								
	STD	0050	0047	3327	2671	0013423	0078	14499	7						
006	OBS	0051	-00930		26780			34.0							
	STD	0075	-0011	3352	2694	0011227	0108		-						
006	OBS	0076	-0013	33532	2695		012	14479							
	STD	0100	0111	3386	2714	0009313	0134	14544							
006	OBS	0102	0120	33880	2715	0007727	0159								
	STD	0125	0197	3415	2732 2745	0006511	0173								
	STD	0150	0260	3438 34420	2747	0000011	0172	14632							
006	085	T0156	0272	34606	2757			1466							
006	085	0195	0317	J-0000	2131			00.							

									ORIGINA	TOR'S	DEPT	H DEPTH		WAVE	WEA- THER	CLOUD			OOC ATION	
REFERENCE	SHIP LATE		LONGITUDE	SOU SOU	ARE	STATION T	I'me	EAR		ATION	80110	OF.		HGT PER SE	30.00	TYPE AMT	!		JANBER !	
CTRY ID.	CODE	1/10	1/10	10.	1° A	AO OAY F	R,1/10		NO. N	UMBER	10110	S.W. BF.2							0083	
1			04706 W	149	67 (06 05	020 1	967	999	99	085	0 08	25	3 2	I xo	10	I	1 (10001	
31 8016	EV 465	0 N I	04706 W.	[14)	WATI		MIND	BARC	AIR TEN	1P. °C	IS. OBS		CIAL							
					COLOR	TRANS DIR.	SPEED	M ETE		WET CO	OEPTI		SHORE							
					CODE	(m)	FORCE	+		039	11									
						24	506	26	1 044					T 00. 0	TOTAL-P	NO2-N	NO3-N	51 04-51	рН	S
	MESSENGR LCAS	T CAR			r *c	s -/	SIGM	A -T	SPECIFIC VOLU		M. V	SOUNO	0 2 ml/l	PO4-P pg - a1/1	μg = 01/1	pg - al/1	yg = 01/1	μg - α1/1	pri	c
	TIME OF NO	TYPE		n)					Anomale	x 1	03			+						
	HR 1/10	-								1	١.			1		1	1	1		' '
	1	i 51	rn 000	o 1	0264	3299	263		001698	6 00		14583 14583								
	020	OB:			0264	32988						14562								
	020	S.			0210	3305	26		001611			14548								
		S.		-	0172	3314	26		001516	7 00		14544								
	020	08:			0161	33176 3326	26		001416	6 00	47	14545								
			TD 003	-	0150	33488						14548								
	020	08.		-	0143	3349	26		001232	2 00		14545								
	020	0 B		-	0055	3366	2 27	02		- 1		14511								
	020		TD 007		0060	3368	27	-	001037	72 01		14514								
	020	08		8	0115	3385			00003			14548								
	0 = 0	S	TD 010		0119	3388		16	00092			14575								
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	020	0.8			0206	3431 3432	_	44	00065	61 01	65	14603								
			TD 015		0211	3451		52				14651								
	020	OE	TD 020		0300	3452	_	52	00056		96	14652								
			TD 025		0334	3464		759	00052	97 02	224	14677								
	020	OE	, , _		0359	3472	_	763	00049	72 0	250	14697								
	0.20		STD 03	00	0360	3472	_	763	00049	15 0	- 50	14727								
	020	0.8	35 03		0390			768 768	00046	30 0	298	14728								
			STD 04		0391	3482 3486		769	00045	-	344	14752								
			STD 05		0406	3489		771				14769								
	020				0411	_	_	771	00044	,	389	14771								
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STO ODD																					
31 30 10 10 10 10 10 10	SHIP		E .	ARSDEN	STATION T			ORIG	INATO	R"S	Т	DEPIN D				WEA-				NODC	
31 301 EV 4650 N 04651 W 149 66 05 033 1967 10000 1207 11 25 3 2 X0 0 0084	CTRY ID. CODE LATT		NGITUDE Z				rear		STAT	ION	T .	CYYOU	OF			THER	CODES		S	TATION	
WALT WIND COOK Man OR Princh OR OR OR OR OR OR OR O	319014 Ev. 445										+	2 /	MPL'S			EA CODE	TYPE AM	T		DWBEK	
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STD ODG OZ55 3323 2653 ODT ODG O										v	15.	200									
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No. No.	MESSENGR CAST	C 4 0 0				Ή					_	1					Γ				П
STD	TIME OF NO.		DEPTH (m)	T °C	s '4.	SIGMA	1-1			DYN.	м.			2 ml/l						pН	Š
033	FIK 1710	ł	-		-	-			-	X 10		-	+		76	20 0.77	28 - 001	yg = 01/1	99 - 017	-	
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STD O030 O198 3338 2670 O013529 O044 14564 STD O050 O213 3384 2706 O010165 O067 14581 O33 OBS O051 O214 33862 2707 14582 STO O075 O364 3431 2730 O007924 O090 14656 O33 OBS O076 O366 34323 2730 O007924 O090 14656 STD O100 O311 3433 2736 O007325 O109 14638 O33 OBS O102 O307 34327 2736 O007325 O109 14636 STO O125 O2293 3437 2741 O006854 O127 14635 STO O150 O277 3442 2747 O006355 O143 14633 O33 OBS O161 O270 34453 2750 O005492 O173 14658 STD O200 O311 3458 2756 O005492 O173 14658 STO O250 O354 3469 2761 O005118 O199 14666 STO O300 O387 3478 2765 O004824 O224 14710 O33 OBS T0308 O391 34788 2765 O004824 O224 14710 O33 OBS O406 O419 34861 2768 O004655 O364 14770 O33 OBS T0605 O409 34887 2771 O004560 O364 14770 O33 OBS T0605 O409 34887 2771 STD O700 O398 3489 2771 O004450 O449 O4	033							00145	20	003											
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033			0050	0213	3384	270	6														
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STO O250 O354 3469 2761 O005118 O199 14686 STO O300 O387 3478 2765 O004824 O224 14710 O330 O85 T0308 O391 34788 2765 O1904824 O224 O22	033	OBS	0204	0315	34592	275	7														
033						276	1	00051	18	019	9	1468	16								
STD 0400 0418 3486 2768 0004655 0272 14740 033 0BS 0406 0419 34861 2768 14742 STD 0500 0414 3487 2769 0004616 0318 14755 STD 0600 0409 3489 2771 0004560 0364 14770 033 0BS 10605 0409 34887 2771 14771 STD 0700 0398 3489 2772 0004495 0409 14782 STD 0800 0386 3489 2773 0004452 0454 14794 033 0BS 10801 0386 3489 2773 0004452 0454 14794 STD 0700 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2775 0004317 0585 14835								00048	24	022	4	1471	0								
033	033																				
STO 0500 0414 3487 2769 0004616 0318 14755 STD 0600 0409 3489 2771 0004560 0364 14770 033 0BS 10605 0409 34887 2771 14771 STD 0700 0398 3489 2772 0004495 0409 14782 STD 0800 0386 3489 2773 0004452 0454 14794 033 0BS 10801 0386 3489 2774 14794 STO 0900 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2776 0004366 0542 14820 STD 1100 0365 3491 2777 0004317 0585 14835	032							00046	55	027	2										
STD 0600 0409 3489 2771 0004560 0364 14770 033 0BS T0605 0409 34887 2771 14771 STD 0700 0398 3489 2772 0004495 0409 14782 STD 0800 0386 3489 2773 0004452 0454 14794 033 0BS T0801 0386 34894 2774 14794 STD 0900 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2775 0004366 0542 14820 STD 1100 0365 3491 2777 0004317 0585 14835	033	-						00046	1.6	031	В										
033 OBS T0605 0409 34887 2771 14771 STD 0700 0398 3489 2772 0004495 0409 14782 STD 0800 0386 3489 2773 0004452 0454 14794 033 OBS T0801 0386 34894 2774 14794 STO 0900 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2776 0004366 0542 14820 STD 1100 0365 3491 2777 0004317 0585 14835			-																		
STD 0700 0398 3489 2772 0004495 0409 14782 STO 0800 0386 3489 2773 0004452 0454 14794 033 085 T0801 0386 34894 2774 14794 STO 0900 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2776 0004366 0542 14820 STD 1100 0365 3491 2777 0004317 0585 14835	033							00045	00	0.20	٠,										
STO 0800 0386 3489 2773 0004452 0454 14794 033 085 T0801 0386 34894 2774 14794 STO 0900 0377 3490 2775 0004361 0498 14806 STD 1000 0370 3490 2776 0004366 0542 14820 STD 1100 0365 3491 2777 0004317 0585 14835								000449	95	040	9										
033		STO	0800	0386																	
\$70 0900 0377 3490 2775 0004361 0498 14806 \$7D 1000 0370 3490 2776 0004366 0542 14820 \$7D 1100 0365 3491 2777 0004317 0585 14835	033		T0801	0386	34894																
STD 1100 0365 3491 2777 0004317 0585 14835								000436	51	049	8										
020 000 1101																					
033 065 1104 0365 34911 2777 14836	0.33							000431	17	058	5										
	0 3 3	085	1104	U365	34911	277	7					1483	6								

REFERENCE CTRY ID. CODE NO.	CODE	LATITU	DE LO	NGITUDE 1/10	MARSDER SQUARE		TATION T	1	rear	DRIG CRUISE NO.	NATOR NITATE NUM	ON.	DEPTH TO BDTTOM	MAX. DEPTH OF S'MPL'	001	WAV ERVA1	TONS	WEA THER CODE	CODES		5	NDDC STATION NUMBER
31/8016	EV	4650	N 04	4637 W	_			049 1 WIND SPEED OR FORCE	967 BARO- METER (mbs)	AIR DRY	OOO WE	C VIS.	NO. OBS. DEPTHS		25 CIAL YATIONS	3 2	2	X0	1 10			0085
	MESSENGR TIME D	CAST NO.	CARD TYPE	DEPTH (m)	T *C	+	s -4.	SIGM	257	7 056 SPECIFIC VO	LUME	50 6 E A D DYN. M x 10 ³	SDU VELC		O 2 ml/1		4-P	101A11 1/10 - gu	ND2-N 19 - 01/1	NO3-N vg - at/l	\$1 O4~\$i	
	049		STO OBS	0000	047		3336 33355	264		00161	88	0000		680 680								
	0 49		STO STD OBS	0010 0020 0025	046 045 044	7 3 5 3 9 3	3337 3345 33508	264 265 265	4 2 7	00159 00152	45	0016 0032	146									
	049		STO OBS STD OBS	0030 0049 0050 0073	038 025 025 029	2 :	3363 33996 3401 34244	271	5 6	00132		0046	14	650 600 601 624								
	049		STO OBS STD	0075 0097 0100	029 032 032	5 3 3 3 4 3	3426 34416 3443	273	2	00076		0089	14	626 644 645								
	049		OBS STD OBS	0125 0146 0150 0195	033 033 034	3Q :	3451 34578 3459 34700	274 275 275 276	4 Q 4	00061		0123	14	655 665 684								
	049		STD STO OBS	0200 0250 T0292	037 040 042	3 3	3471 3478 34828	276 276 276 276	1 3	00051 00049		0165 0191	14	686 708 724								
	049		STD OBS STD	0300 0387 0400	042 045 044	0 3	3484 34909 3491	276 276 276	8	00048	10	0215	14 14 14	727 752 752								
	049		STO OBS STD STD	0500 T0574 0600	041 040 040 039	2 3	3490 34897 3490 3491	277 277 277 277	2	00044 00043 00043	58	0307 0351 0395	14	757 763 766 780								
74	049		OBS STD OBS	T0772 0800 0805	038 038 038	7 3	34913 3488 34872	277 277 277	5 3	00045		0439	14	790 792								

FERE	IO.	SHIP	LATITU	DE L	ONGITUOE	DRIFT		ARSOEN OUARE	STA	TION TI	ME	YEAR	CRUIS	E	ATOR'S	\dashv	HT93D TO MOTTO8	OEPTH OF	OB	WAV	nons	WEA- THER COOE	CLOUG	J		NODC HOITATION HUMBER
DE	NO.	2002		1/10	1/10	_ <u>z</u>	10)* 1*	MO	DAY H	R,1/10		NO	-	NUMBER	-+		S'MPL'	S DIR.	1	ER SEA	1	TYPE AM	1	-	
3 8	3016	Ev	4650	N O	4623 W	1	14	49 66	06	05 0)64	1967	1	10	002		0384	04	25	3 2	2	XO	1 0		ŀ	008
-		'						WA	TER	W	IND	BAR	o- L	AIR TE	MP. ℃	VIS.	NO.	SPE	CIAL							
								COLOR		S OIR	SPEED	MET	ER	ORY BULB	W ET BULB	COOS	OBS. GEPTHS		ZHORS							
								CODE	(m)	-	FORCE	(mb	1	0060	800	-		-								
										00	500	25	4	067	056	6	09	<u> </u>		Ц						
		MESSENGE TIME HR 1/10	약 NO.	CARO	ОЕРТН	(m)		1 ℃		*/	SIGN	T-A		MALY-X	107 0	△ 0 N. M. 10 ³		OCITY	O2 ml/			1ΟΤΑ L - P μg - σt/1	NO2~N µg = ol/l	NO3-N NO3-01/1	SI O4-S V9 - 01/	
		MK 1710	+				+		+		1															
			1 1	ST	000		1	0497	1 3:	346	26	4.8	' nn	1560	າຣ ່ ດ	000	14	688		,	,					
		06	/.	085	000			0497		3458	26	-	00	1,00	,, ,			688								
		00	4	STE				0499		348	26		00	154	74 C	016	14	691								
				ST				0500	-	350	26		0.0	1534	44 0	031	14	693								
		06	4	OBS	002	6		0501	3	3512	26	52						695								
				ST	003	0		0473	3	361	26	63	0.0	142		046		685								
				STI	005	0		0358	3	398	27	04	0.0	103	32 (070		645								
		06	4	OBS	009			0349		3999	27							642								
				STI				0280	-	406	27		0.0	090	51 (095		617								
		06	4	085	00			0271		4085	27			07/	25 6	1 1 0		614								
				ST				0362		435	27 27		00	076	25 L	115		669								
		06	4	085	010			0431		4405 456	27		0.0	067	63 (133		696								
				STI	_			0475		471	27			061		149		721								
		06	4.	0BS	T015			0481	_	4732	27							724								
		0.6	7	STI				0488		483	27		0.0	054	44 (178	14	736								
		0.6	4	OBS	020			0489		4845	27						14	738								
		0.6	7	STI				0462	-	486	27		0.0	049	86 (205	14	1734								
				ST	_			0436		487	27		00	046	76 (229		731								
		06	4	OBS	103			0431		4872	27	67						731								
		06		OBS	038			0410	3	4884	27	70					14	+735								

REFE	RENCE				GITUDE SOUTION	MARSDEN	ST	ATION				RIGINATO	R*S	DEPTH	MAX. DEPTH		WAVE RVATIONS	WEA-	CLOUG			NOOC	
CTRY	10.	CODE	LATITU			SOUARE		(GMT		YEAR	CRUISE NO.	TATE		TO BOTTON	1 00	3030	HGT PER SE	_ COOF	TYPE AM	1		UMBER	
CDDE	NO.	-		1/10	1/10 =	10° 1°			HR.1/10		1			0.202								0087	
31	8016	EV	4650	N 04	602 W	149 66	Q6 ATER			1967	1 1	1000 R TEMP.		0293	03	25	2 2	XO	1 10	1	1	00071	,
						COLO			WIND	BARO	o-		VIS.	NO. 085.		CIAL							
						coc			FORC	I down to a			ILB COD	OEPTHS	S								
								00	500	25	4 08	33 0	72 6	0.8									
		MESSENGE					T				SPECIFIC	VOLUME	≨ ∆ 0	sc	סמטס		PO ₄ =F	TOTAL-P	NO2-N	NO3-N	SI O 4 - Si	рН	S
		TIME HR 1/10	or NO.	TYPE	OEPTH (m)	1 %		s °/	SIG	MA-T	ANDMA	LY-X107	OYN. A x 10 ³		LOCITY	O 2 ml/1	μg ~ a1/1	μg - ot/l	µg + a1/1	μg = α1/1	μg - e1/I	prs	č
		HE 1710	+-				+																
		ŀ	1	STD	0000	0457	່ 3	347	26	553	001	5081	0000) 14	4672								
		0.8	4	OBS	0000	045	3	3472	2 26	553					4672								
				STD	0010	0463	3	349	26	554		5033	0015		4676								
				STD	0020	0469	3	350	26	555	001	4986	0030) 14	4681								
		0.8	4	OBS	0026	037		3514		660			0011	. 1	n . .								
				STD	0030	0479		363		64		4112 1187	0045		4687 4700								
				STD	0050	048		404		595	001	110/	0070		4701								
		0.8	4	OBS	0051 0075	048		4053 421		596 716	000	9218	0099		4678								
		0.8		STD	0076	041		421		716	000	, _ 10	007.		4678								
		00	7	STD	0100	046	_	446		731	000	7806	011	7 1	4703								
		0.8	4	OBS	0102	046		447	B 27	732					4705								
			•	STD	0125	047) 3	458	2	740		7031	013	_	4713								
				STD	0150	047		466		745	000	6530	015	_	4721								
		0.8	4	OBS	T0156	047		4671		746	000	E 0 0 0	010		4722 4715								
				STD	0200	044		470		753	000	5898	018		4714								
		0.8	4	085	0206	043		471		754 758	000	5390	021		4719								
		0.0		STD OBS	0250 T0291	043 042	-	482		764	000	2290	021	_	4725								
		0.8	4	005	10271	042	-	702						_									

																		,								
EFER	ENCE	SHIP				DRAFT	MAR	SOEN	STA	TION T					ATOR'S		OEPTH	MAX.		WAVE	NIC	WEA-	Cronp			ODC
RY	10,	CODE	LATITU	- 1	LONGITUDE	NO SE	son			(GMT)		YEAR	CRUISI		NOITATE	RI	OT OTTOM	OF		OIT AVRE		CODE	COOES			ATION :
OE	ио,			1/10	1/	10	10"	1.	MO	OAY	IR,1/10		NO,	-	NUMBER	-		S'MPL'S	DIR.	HGT PER	SEA		TYPE AM	-	- 1	
3 1	8016	EV	4709	N.	04602	W	149	76	06	05	104 1	967		10	004	0	320	03	25	2 2		×ο	10			8800
								WA	TER	1	WINO	BARO		AIR TE	M.P. ℃	vis.	NO.	SPEC	CIAL							
								COLOR	TRAN:	S. OIR.	SPEED OR	(mbs)		ORY	WET BULS	CODE	OBS.		A TIONS							
								COOL		+-	FORCE	+	-+-			-										
									<u> </u>	00	500	26	1 (72	061	6	09			,						
		MESSENG	CAST	CAR	10 0507	H (m)	1	*C	١,	/	SIGM	, ,	SPECIFI	c volu	ME S	Δ O (N. M.		ОИС	O2 ml/l	PO4-	PTO	OTAL-P	NO2-N	NO ₃ -N	SI O4-Si	-11
		HR 1/10	T NO.	TYP	E DEFT	rs (m)		C	'		31GW	^-1	ANOA	ALY-X	107	K 10 ³	VELC	CITY	O 2 mi/1	pg - a	لا 1/1	g - o1/l	fp - gy	μg - α1/l	µg + a1/1	pН
		11.0							+	-							1				\rightarrow					
		I	1	c	TD OC	00	1	384	1 33	324	264	ا اه	00	1609	0 0	000	1 1 4	638		1	1	- 1	'			
		10	4	08		000		384		3243			00.	,		000		638								
		1.0	*		_	10		445		339	264		00	1558	15 0	016		667								
						20		477		353	265	_		1487		031		684								
		10	4	QВ		25	0	482	33	3592								688								
				S	TO OC	30	0	460	33	364	266	66	00	1387	8 0	045	14	680								
				S	TD OC	50	0	1396	33	885	269	90	00	1169	6 0	071	14	660								
		10	4	90	-)50		1396		3847								660								
						75		370		+13	27:		000	0932	21 0	097		657								
		10	4	OВ	_	75		1370		+132								657								
						.00		463		+49	273		000	3764	+O O	118		704								
		10	4	ОВ		.00		463		+485				- 7		103		704								
						.25		455		+55	273			709		137		706								
		10	/.			.50	-	448	-	+62 +630	274		000	0651	.6 0	154		708 708								
		10	4	OB		200	-	447		+60 +80	274		000	0556	. 1 0	184		731								
		10	4	08		201		479		•806			000	0000	, 1 0	-04		732								
		10	-			50		476		+84	276		000	529	23 0	211		739								
				_		300		437		85	276)483	-	237		731								
		10	4	08		301	U	451		+851	210	, ,	000	, 403	, , ,	1	14	101								
		10		08		311	0	424		+849	276	56					14	728								
		10	-	00	0.	4.4		764			210							120								

	10NGIT	1/10 NOE 30	9 76 WAT		YEAR	AIR TEMP.	ION IBER	NO. S	F DIR.	WAVE RVATIONS HGT PER SE	WEA- THER CODE	COOES	T	S1 N	NODC PATION UMBER
MESSENGR CAST	CARD			22	S07 25	4 061 0	50 7	SOUND		PO4-P	TOTAL-P	NO ₂ -N	NO ₃ N	S1 O4-Si	s
HR 1/10 T	TYPE	OEPTH (m)	7 °C	\$ */	SIGMA-T	ANOMALY-X107	2 10 ³	, AETOCILA	O ₂ ml/l	yg = 01/1	μg = at/l	μg - al/l	yg - a1/1	yg - 01/1	pH C
, , , ,	STD		0406	3335	2649	0015485	0000								
128	OBS		0406	33351	2649			14649							
	STD		0390 0371	3344 3358	2658 2671	0014670	0015								
128	OBS		0360	33667	2679	0013444	0029	14638							
	STD		0338	3382	2693	0011340	0042								
	STD		0294	3429	2735	0007420	0060								
128	08s STD		0293 0333	34306 3450	2736	0006706	0077	14622							
128	085		0334	34507	2748 2748	0006204	0077	14646 14646							
120	STD		0354	3461	2754	0005593	0092								
128	OBS		0356	34616	2755			14662							
	STD		0376	3468	2758	0005303	0106								
1.70	STD		0394	3474	2761	0005056	0119	14687	7						
128	OBS STD	0152	0419	34746 3481	2764	0004839	0143	14707	,						
128	085		0419	34817	2764	0004639	0143	14707							
120	STD		0421	3486	2767	0004541	0167								
	STD	0300	0423	3488	2769	0004457	0189	14726	,						
			0423	34884	2769			14727							
128	085	0356	0412	34881	2770			14731							

																			,											
REFERENCE	SHIP					ADCTR	ARSI	DEN	ST	ATION	TIME			0	RIGINA	ATOR'S		DEPTH	MAX.			AVE	LI C	WEA-	CLO				NODC	
CTRY ID.	CDDF	LATITU		LONGI	ITUDE		50UA			IGMT		YEA	AR	CRUISE NO.		TATION IUMBER		BOTTOM	OF	*				THER					UMBER	
COOF NO.	-		1/10		1/10	= 1	0°	1.	MD	DAY	HR.1/10	-	\rightarrow	NO.		IU W BEK	-		S'MPL"	S DIR	Н	FT PER	SEA	-	TYPE	IMA				
31801	6 EV	4749	N F	046	02 W	1	49	76	06	05	149	19	67		100	006		0732	07	24	4 2	2		l xo		0			0090	
								WA	TER		WIND		BARO	A	IR TEM	AP. ℃	vis.	NO.	SPE	CIAL										
								COLOR	TRAP		SPEE	0 1	METER	2 D	RY	WET	COD	OBS. DEPTHS	OBSERV		5									
							J	CODE	- tm	1	FOR	CE	(mbs)	80	JLB	BULB	-				4									
										2:	3 51	0	25:	1 0	67	056	8	11												
	MESSENG	RICAST	CAR						T					SPECIFIC	VOLUE	MF \$	ΔD	501	JND			PO ₄ -	, ₁	OTAL-P	NO2-	_N	NO3-N	SI O4-Si		5
	TIME	of NO.	TYP		DEPTH (r	m)	T	°C		5 %.	510	SMA-	-Т	ANDMA		., I D	YN, M x 10 ³		CITY	O2 ml	1/1	µg = 01		μg - 01/1	µ0 - 0		μg - αt/l	μg - o1/i	pН	200
	HR 1/10	0	-			-	_		+		-		-			_				-	-		-			-				+
																		1	į.										I	11
			S	TD	0000	0	_	445		357		662		001	423	0 0	000		668											
	14	9	08		0000			445		356		662							668											
				TD	0010			379		368		678		001			013		644											
				T D	0020			321		379		692		001	140	8 0	026		622											
	14	19	ОВ		0025		-	294		383		699							612											
				TD	0030		-	256		389		706		001	011	2 (036		597											
	14	9	ОВ		004			191		407		726							574											
				TD	0050			195		408		726		000	821	3 (055		576											
	14	19	08	_	007			296		430		736							627											
				TD	007		_	303		432		736		000	128	9 (074		630											
	1 4	9	08	_	009			428	-	459		746							691											
			-	TD	0100			428		460		746		000			091		691											
				TD	012		0	429		467		752		000	591	2 (107	14	697											
	14	9	ОВ		014					473		75,		000	E / 7	0 6	121	3.6	702											
				TD	015			429	_	473		756		000	241	8 (121													
	14	+9	ОВ		019			430		481		763					. 1		711											
				TD	020			430		482		763		000			147		712											
			_	TD	025		-	436		487		767		000	462	۷ (170		723											
	14	+9	08		T029			441		490		769		000			101		733											
		_		TD	030			440		490		769		000	449	6 (193		734											
	14	+9	ОВ	-	039		_	405		487		770		000		_	1238		735											
				TD	040			405		487		770		000			282		751											
				TD	050		_	404		489		772		000	401	4 (1 - 0		766											
	14	+9	08		T059			401		490		773		000	/. 2.1	7 (325		767											
				TD	060			401			_	774		000			1369		782											
				TD	070			397		491		774		000	401	4 (100		783											
	14	+9	ОВ	5	071	2	U	396	3	490	2	1 (4						14	100											

	_								MAX.		WAVE	WEA-	CLOUD			IODC	
REFERENCE		H E	MARSDEN	STATION TIME	YEAR	DRIGINATO		DEPTH	DEPTH		RVATIONS	THER	CODES		ST	ATION	
		GITUDE BO	SOUARE			CRUISE STAT		BOTTON	S'MPL'S	DIR.	HGT PER SE	CODE	TYPE AM		NI	JARBER	
CODE NO.	1/10	1/10				1000	7	0967	09	22	2 2	X 1	3 2			0091	
318016 EV 48	10 N 04	502 W		06 05 17		AIR TEMP.		T	1		- 1- 1	1					
			ITAW		- OAK	0-	ET COD	NO.	SPEC OBSERV								
			COLOR	TRANS. DIR.	DR (mbs		ITB COD	DEPTHS	DRZEKA	4110143							
			4350		510 24	4 072 0	67 7	12									
				24	510 24								NO. N	NO3-N	SI O4-Si		5
MESSENGR CA	ST CARD	DEPTH (m)	1 °C	5 %.	SIGMA-T	SPECIFIC VOLUME ANDMALY-X107	Z △ D	A. 1	DOLLA	02 ml/l	PO4-P	1DTAL-P ug - 01/1	NO2-N ug - ol/l	µg - 01/1	1/10 - gu	pН	c
HR 1/10	. TYPE	DEFIN OU				Altomatical	x 10 ³				-	-	-				+
1710												1		1	1	1	11
	STD	0000	0485	3381	2677	0012842	0000		+688								
174	OBS	0000	0485	33809	2677				+688								
174	STD	0010	0474	3410	2701	0010551	001		+689								
	STD	0020	0458	3427	2717	0009116	002		+686								
174	OBS	0021	0456	34287	2718				4686								
	STD	0030	0430	3428	2720	0008761	003		4676								
174	OBS	0044	0401	34268	2723		001		4666 4666								
	STD	0050	0395	3435	2730	0007903	004		4667								
174	085	0065	0387	34506	2743	000/50/	006		4670								
	STD	0075	0388	3453	2745	0006506	006		4673								
174	OBS	8800	0390	34566	2747 2751	0005937	008		4669								
	STO	0100	0374	3459	2758	0005323	009	- :	4665								
	STD	0125	0355	3465 34660	2759	0003323	00,		4666								
174	OBS	T0132	0362	3470	2761	0005037	010		4673								
	STD	0150	0373	34744	2763	0000001	0 - 0		4683								
174	OBS	0178 0200	0378	3477	2765	0004715	013		4689								
	STD	0250	0386	3480	2766	0004617	015	5 1	4701								
174	OBS	T0266	0387	34811	2767				4704								
174	STD	0300	0387	3482	2768	0004521	017		4710								
174	085	0361	0386	34830	2769				4720								
2.7	STD	0400	0396	3485	2769	0004490	022		4731								
	STD	0500	0410	3488	2770	0004516	026		4754								
174	OBS	T0548	0412	34894	2771		- 2 -		4763								
	STD	0600	0405	3489	2772	0004452			4768								
	STD	0700	0393	3489	2773	0004410	035	, .	4780								
174	OBS	0732	0389	34894	2773	0001340	040		4792								
	STD	0800	0382	3490	2774	0004360	040		4800								
174	OBS	0863	0376	34898	2775			1	-800								

																							_	
REFERENCE	SHIP I		25 10	# E	MARSI		STATION T		VF 4 D			ATDR'S		DEPTH	MAX.		WAVE ERVATION	S WE				1 2	ODC	
COOS NO	. I cons I	LATITU	1/10	NOUTH TOUR	10°		MD DAY F		YEAR	CRUISE NO.		TATION	Ì	TO BOTTOM	0.6	1 000	H GT PER					N 31	UMBER	
-													-	1	1									
3180	16 Ev	4818	5N 04	602 W	149	86			967			800		1189	11	21	2 2	l x	1 3	7			0092	ł
					-			SPEED	BARO	•	RY TEA	WET	vis.	NO. DBS.		CIAL								
						COLOR	TRANS. DIR.	FORCE	(mbs)	Î RU	JL8	BULE	COOL	DEPTHS	DRZEKA	ATIDNS								
					Ì		24	512	23	7 0	72	067	7	12										
	MESSENG			T	T		1	1	1 = -					-				1				F1 P 4		1
	TIALS	or NO.	TYPE	DEPTH (m)	T	℃	s */	ZIGM	A-T	SPECIFIC		7 D	∆ 0 N. M x 10 ³	· VELO	DCITY	D 2 ml/l	PD4-P	TOTAL-			O3~N	SI D4-SI Vg - ot/I	рΗ	Č
	HR 1/10	3			-		-	1					x 10-				+	+		-	-			+1
		1 1			1		1					_		1										11
		_	STD	0000		479	3374	26		001	332	7 0	000		685									
	19	0	085	0000		479	33736	26		001	0.07	2 0	012		685									
			STD	0010		424 382	3399 3417	269		000			012		667									
	19	.0	OBS	0026		363	34249	27		000	710	9 0	0 2 2		647									
	17	0	STD	0030		361	3426	272		000	823	6 0	031		647									
			STO	0050		339	3430	27		000			047		642									
	19	0	085	0052		336	34305	27							641									
		_	STD	0075	0.	282	3438	274	+3	000	665	4 0	065	14	622									
	19	0	OBS	0077		280	34392	274							622									
			STD	0100		293	3449	27		000	593	6 0	080		633									
	19	0	085	0104		296	34509	27!				_			635									
			STD	0125		320	3458	275		000			095		650									
	19		STD	0150 T0156		345 351	3466 34676	275		000	211	2 0	108		665									
	17	0	085 ST0	0200		389	3477	276		000	482	7 0	133		694									
	19	0	OBS	0206	-	392	34778	276		000	402	, 0			696									
	• 1	•	STO	0250		380	3479	276		000	463	1 0	157		699									
			STO	0300		372	3480	276		000			180		704									
	19	0	OBS	T0308	0	371	34803	276	8					14	704									
			STO	0400	0	374	3482	276	59	000	447	9 0	225	14	721									
	19	0	OBS	0409		375	34826	27							723									
			STO	0500		384	3486	27		000			269		742									
		_	STD	0600		394	3489	27		000	438	4 0	313		763									
	19	0	OBS	10613		395	34890	27		000	. 25	2 0	267		766									
			SID	0700		390 384	3490 3491	271		0004			357		793									
	19	0	STD 085	T0820		383	34907	27		000	40 I	0 0	-00		796									
	17	0	STO	0900		377	3491	27	-	000	429	4 0	443		807									
			STD	1000	-	369	3491	27		000			486		820									
			STD	1100		360	3492	27		000			528		833									
	19	0	OBS	1124		358	34916		-						836									

CTRY	ID, NO,	SHIP	LATITU	DE 1/10	LONGITUDE	DRIFT	MARSI SQUA	ARE	AT2 OM	TION T		YEAR	CRUIS ND.		STATIO NUMB	N	DEPTH TO BOTTOM	MAX, DEPTH OF S'MPL"		WAVE SERVATI	DNZ	WEA- THER CODE	Co	OUD DES		S.	NODC TATION UMBER	
31	8016	EV	4438	5N	04911 0W		149	49	06	06	174	1967		10	009		0058	00	27	2 2		X 2	7	8			0093	
								W.A.	TER		MIND	BAR	0-	AIR TE	MP. ℃	VIS.	NO.	CPE	CIAL									
							- 1	CDLDR CDDE	TRAN imi	S. OIR.	SPEED OR FORC	MET	ER	DRY BULR	BUL M.E.	CODI	OBS. DEPTHS	OCCEDIA										
										22	514	24	7	094	08	9 6	03											
		MESSENGR TIME HR 1/10	약 ND.	CARD		(m)	1	℃		*/4.	SIG	MA-T		MALY-XI	167	≨ △ 0 DYN. M x 10 ³	. AETI	DCITY	O 2 ml/	PO 4		TOTAL-P ug - oi/I			NO3-N µg - ot/l	SI O4-Si /Io - gu	pН	c c s
		17-	·	ST OBS				645 645		265 2654		67	00	2332	1	0000		738 738			1							
		11	•	ST	D 001	0	0	509	32	266 270	25	84		2173 2015		0023	14	684										
		17	4	0BS	002	5	0	316	32	2729 276	26	08		1865	_	0063	14	606										
		17	4	ST OBS				024		297 2973		48	00	1557	1	0097		484										

									-				_			D DI CINI	A TOO!			TN	WAX.		WAVE		WEA	Τ,	crono	1		NOO	
REFE	RENCE	SHIP	LATITU	0.6	LONG	SITUOE	DRIFT	MARS		STA	TION (GMT	TIME	YE	AR	CRUISE	DRIGIN	TATIO		DEPTI	H 08	EPTH	089	ERVAT		THER	1 0	COOES			STATIO	NC
CODE	10. NO.	CODE	-	1/10	20111	1/10	P로는	10*	1.	MO	DAY	HR,1/1	0		NO.		UMBI		80110		MPL'S	DIR	HGT P	ER SEA	CODI	T	TFE AM	T		NUMB	EX
21	8016	EV	4436		045	901 W		149	49		06	185	_	967		10	010		054	9	05	24	2 2	2	X 2		7 8			00	94
1 31	0010	1 - 4	4430	IN [04.	,01 #	1	1	WA		Ť	WINO	1	BARO		AIR TEA		_	NO.		SPEC										
									COLOR	TRAN	OIR		R	METE {mbs	R (DKY ULB	W E		0.00		SERVA										
								ŀ		-	-	FO			_	11	10	0 6	10	-											
								لــــــــــــــــــــــــــــــــــــــ		4-	20	0 51	. 0	24	/ 1	11							-						T		
		MESSENG TIME HR 1/1	of NO.	CAR TYP		OEPTH	(m)	ī	℃	1	•/	s	IG M A	τ	SPECIFIC	ALY-II		₹ △ □ DYN, M x 10 ³		ELOCIT		O 2 ml/l		4-P - at/1	101AL-1		02-N 0- ot/l	NO3-N 19 - 01/l	SI O4- µg - 01.		pH C
		1111			\dashv																										
			1	١	TD 1	000	ın '	0	406	่ จ:	78	, ,	60	4 '	001	977	9	0000	· 1	464	+1										
		18	35	08		000			406		78		260						1	464	+1										
					TD	001	.0	0	290		80		261			865		0019		459											
				S	TD	002			183		81		262		001	776	1	0037		454											
		18	35	ОВ		002			133		81		262		001	669		0055		452											
					TD	003			073		86		263 265			485		0086		443											
		18	3.5	0B		005			087		300		265		00.		,	0000		443											
			35	ОВ		007			107		308		266							442											
					TD	007	75	-0	108	3	309	- 2	266	3	001	416	9	0122		442											
		18	35	08	S	009			109		310		266					-1		443											
					TD	010		_	107		311		266			1396		0158		L443 L446											
		1.1	0.5		TD	012			047		333 351		268 269		UQ.	1249	, 9	0191		1450											
		T	85	08	TD	015			800		352		269		00	130	1	0220		1450											
		1.8	9.5	08		019			102		381		271						1	455	56										
		-			TD	020		C	106	3	383		271	2	000	0951	9	0273		1455											
					TD	025	50	C	274	3	435		274	1	000	0691	. 7	0314		1464											
		1	85	ОВ		029			376	-	+68		275							1470											
					TD	030			378		469		275	-	000	0540) 4	0344		1470 1473											
		1	85	08		T039			416		483 484		276 276		001	0478	2.1	039		1473											
		,	D.E.	08	TD	040)416)414		404 488		210 277		001	J 7 1 C	, 1	J- J.		1475											
		1	85	00	,3	045	, ,		, -4 T .4	,			_ ' '	-																	

REFERENCE	SHIP			-	MARSOEN	STATIO	N TIME	T		RIGINA			DEPTH TO	MAX. DEPTH	OBS	WAVE ERVATIONS	WEA- THER	CLOUD			NOOC	
CTRY IO.	CODE	LATITU	- 1	LONGITUDE 17/10	SOUARE		M II	YEAR	CRUISE NO.		A TION J M BER	- 1	BOTTOM	OF S'MPL*S		HGT PER SE	CODE	TYPE AM	-		UMBER	
-	(5)	4435	1/10	04856 W	149 48		6 19		,	100	1.1		0805	08	24	2 2	Х2	7 8			0095	
31 801	6 EV	4430	N	04636 W	1 - 1	TER I	WIN	2	1 4	IR TEM		ΠÌ	NO.			- -	1	,	,			
					COLO	-	5	PEED M.F.	:0+	RY	WET	VIS.	085.	DBSERV	ATIONS							
					COOL			ORCE (mb		11,8	BULB		OEPTHS									
							19 S	12 24	7 10	00	089	6	11									
	MESSENGR TIME O		CAR TYP		1 °C	S	1	SIGMA=T	SPECIFIC ANOMA		DY	△ 0 N. M. 10 ³		OCITY	O 2 ml/1	PO4-P pg = 01/I	10TA L-P µg + ot/I	NO2-N ug - at/l	NO3-N	\$104-\$i 1/10 - 8u	ρН	5 0
																						11
	1	'	S	TD 0000	0402	327		2602	001	9960	00	000		639								
	195	5	08:		0402	327		2602						639								
			S		0302	327		2612		9028		019		598								
				TD 0020	0199	327		2621	001	8191	00	38		555								
	195	5	08:		0146	327		2625	001	6891	0.0	356		532 499								
			S		0068	328		2634	001	0091	. 01	000		417								
	195	•	08:		-0122	330		2658 2659	001	4563	s 01	087		417								
	1.01	-		TD 0050 S 0074	-0122 -0120	33		2669	001	4702	, ,	001		424								
	199	>	OB	TD 0075	-0119	33		2669	001	3559	0	122	_	424								
	19	_	0B		-0092	33		2676	001	,,,,	, ,			442								
	19:)		TD 0100	-0088	33		2677	0.0.3	2807	7 0	155		445								
				TD 0125	-0024	334		2687		1838		186		481								
	19	6	08		0050	330		2701						522								
	17	,		TD 0150	0055	330		2702	001	0492	2 0	214	14	524								
	19	5	08		0249	34		2736					14	627								
	17.			TD 0200	0251	34		2736	000	7366	6 0	259	14	628								
				TD 0250	0340	34	6	2752	000	5955	5 0	292	14	678								
	19	5	08		0395	34	743	2761						712								
			S	TD 0300	0396	34	75	2761	000	514:	3 0	320		713								
	19	5	08	S T0398	0421	34	338	2766						741								
			S	TD 0400	0421	34		2766		483		370		741								
			S	TD 0500	0416			2769	000	465	7 0	417		756								
	19	5	QВ	S T0595	0411		392	2771						770								
			S	TD 0600	0411	34		2771		453		463		771								
			S	TD 0700	0405			2772	000	4540	0 0	508		785								
	19	5	08	S T0799	0399	34	398	2773					14	799								

REFERENCE CTRY ID.	SHIP	LATITU	DE LON	IGITUDE FE	MARSDEN SOUARE	STATION TIM		EAR ,	ORIG1	S'ROTAN		DEPTH	MAX, DEPTH OF		WAVE RVATIONS	WEA- THER	CLOUD		NO STAT	
CODE NO.	CDDE	•	1/10	· 1/10 0 =		MO DAY HR.			ND.	NUMBER	-	BOTTOM	Z,W br.2		HGT PER SEA		TYPE AMT		NUA	ABER
31 8016	Ev	4433	5N 04	842 W	149 48 WAT			967 BARO	A 1D T	0012 MP. °C		2103 NO.	11]		2 3	X4	718	l	1 00	096
					COLOR	TRANS. DIR.	SPEED OR FORCE	METER (mbs)		WET	CODE	200	SPEC OBSERVA							
							510	247	7 078	072	6	12								
[MESSENGR TIME	CAST NO.	CARD TYPE	DEPTH (m)	т *с	s ·/	SIGMA	т_,	SPECIFIC VOL	UME ∑	AN. M	SON		D2 ml/l	PO 4-P		NO2-N		SI D4-Si	pH C
	HR 1/10		1176					-	NITO MINET		x 10 ³	7610	CIII		µg = a1/1	1/1a - gu	1/10 - gu	pg - at/1	1/10 - Qu	
1		1	STD	0000	0384	3295	262	0	00182	ا 59 0	000	14	634		ł ł	ı	- 1	- 1	1	1 1
	209)	OBS STD	0000	0384 0382	32954 3307	262		00173	80 0	018		634 637							
			STD	0020	0379	3320	264	0	00163		035	14	539							
	209)	OBS STD	0026 0030	0378 0362	33273 3333	264		00152	52 0	051		640 635							
	209)	STD OBS	0050 0052	0284 0276	3361 33633	268 268		00124	68 0	078		609 606							
			STD	0075	0183	3387	271	0	00097	23 0	106	14	572							
	209	,	08S STD	0077 0100	0181 0229	33888 3410	271		00083	43 0	129		572 599							
	209)	08S STD	0102 0125	0235 0364	34123 3442	272		00071	39 0	148		603 666							
	204		STD	0150	0453	3464	274	6	00064		165	14	711							
	209	,	OBS STD	T0153 0200	0460 0461	34664 3475	274 275	4	00057	41 0	195	14	714 724							
	209	•	OBS STD	0205 0250	0461 0489	34757 3485	275		00053	66 0	223		725 745							
	2.0.0		STD	0300	0504	3492	276	3	00050		249	14	760							
	209	,	OBS STD	70306 0400	0505 0486	34930 3495	276 276	7	00047	60 0	298		762 770							
	209	•	08S STD	0408 0500	0484 0454	34954 3495	276 277		00045	12 0	345		770 773							
	200		STD	0600	0427	3494	277	3	00043		389	14	778							
	209	,	OBS STD	T0608 0700	0425 0404	34940 3492	277		00043	43 0	433		779 785							
	209)	STD OBS	0800 T0805	0387 0386	3491 34909	277 277		00043	14 0	476		794 795							
	20,		STD	0900	0382	3491	277	5	00043		519	14	808							
			STD STD	1000 1100	0377 0372	3491 3491	277		00043)563)607		823 838							
	200																			
	209)	085	1109	0372	34910	277	7				14.	839							
REFERENCE			085	1109				7	DRIG				839 MAX.		WAVE	lue.	CIQUE		1	
REFERENCE CTRY ID. CODE NO.	SHIP	LATITU		1109	MARSDEN SQUARE	STATION TIA	ΛE Y	7 YEAR	DRIG CRUISE NO.	INATOR'S STATION NUMBER	4	DEPTH TO BOTTOM	MAX. DEPTH OF	OBSI	WAVE ERVATIONS	WEA- THER CODE	CLOUD		STA	DDC TION MBER
CTRY ID.	CODE		DE LD1	AGITA 30 MIFT	MARSDEN SQUARE	STATION TIME IGNTS MO DAY HR. 06 06 2	ΛΕ .1/10		CRUISE NO.	INATOR'S	4	DEPTH TO	MAX. DEPTH	DIR	WAVE ERVATIONS HGT PER SE	THER		T	STA NU	TION
CTRY ID.	CODE	LATITU	DE LD1	NOCTR 10078	MARSDEN SQUARE 10° 1° 149 48	STATION TIME IGMTS MO DAY HR 06 06 2 TER WI	1/10 25 1	/EAR	CRUISE NO.	STATION NUMBER 0013	ł ł	DEPTH TO BOTTOM 2834 ND.	MAX. DEPTH OF S'MPL'S 11	DIR. 26	HGT PER SE	THER	TYPE AM		STA NU	MBER
CTRY ID.	CODE	LATITU	DE LD1	NOCTR 10078	MARSDEN SQUARE	STATION TIME IGMTS MO DAY HR. 06 06 2 TER WI TRANS. DIR.	AE Y	967 BARD METE	CRUISE NO.	STATION NUMBER OO 1 3	VIS.	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS	MAX. DEPTH OF S'MPL'S	DIR. 26	HGT PER SE	THER	TYPE AM	T	STA NU	MBER
CTRY ID.	SHIP CODE EV	4430	DE LD1	NGITUDE 1/10 YES	MARSDEN SQUARE 10° 1° 149 48 WA' COLOR CODE	\$TATION TIME [GMT] MO DAY HR 06 06 2 FER WIT TRANS: DIR.	AE Y 1/10 25 1 ND SPEED OR FORCE S12	967 BARD METE (mbs) 24	CRUISE NO.	INATOR'S STATION NUMBER 0013 EMP. C WET BULB 072	- vis.	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS	MAX. DEPTH OF S'MPL'S 11	DIR. 26	ERVATIONS HGT PER SE	THER CODE	TYPE AM		STA NU.	MBER
CTRY ID.	SHIP CODE	4430	1/10 1/10 05N 04	NOCTR 10078	MARSDEN SQUARE 10° 1° 149 48 WA°	STATION TIME IGMTS MO DAY HR. 06 06 2 TER WI TRANS. DIR.	AE Y	967 BARD METE (mbs) 24	CRUISE NO.	INATOR'S STATION NUMBER 0013 EMP. 'C WET BULB 072	VIS.	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS	MAX. DEPTH OF S'MPL'S 11	DIR. 26	HGT PER SE	THER	TYPE AM	NO3-N yg - 01/l	STA NU	MBER
CTRY ID.	SHIP CODE EV	LATITU.	DE LDI 1/10 05N 04	NGITUDE 1/1/10 E S 2 9 W	MARSDEN SQUARE 10° 1° 1° 1° 1° 1° 49 48 WA' COLOR CODE	STATION TIME IGMT! MO DAY HR 06 06 2 IER WI TRANS. DIR. 10 20 5 1/2.	AE Y 1/10 25 1 ND SPEED OR FORCE S12	967 BARD METE (mbs) 24	CRUISE NO. 1 AIR 1 R DRY BULB 7 072 SPECIFIC VO ANOMALY-	STATION NUMBER 0013 EMP. C WET BULB 072 LUME x107	VIS. COD 2 6 Σ Δ D Σ ΥΝ. Μ χ 10 ³	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS 12 SOUVELE	MAX, DEPTH OF S'MPL'S 11 SPEC OBSERV.	DIR. 26	PO4-P	THER CODE X4	TYPE AM	ио3-и	STA NU. O	MBER 097
CTRY ID.	SHIP CODE EV	LATITU 4430	CARD TYPE	NGITUDE 11/10 829 W	MARSDEN SQUARE 10° 1° 149 48	STATION 71M [GMT] MO DAY HR 06 06 2 FER UNITED DIR. 20 5 %.	1//10 25 1 ND SPEED SOR FORCE \$12	967 BARD METE (mbs) 24	CRUISE NO. 1 AIR 1 R DRY BULB 7 072 SPECIFIC VO ANOMALY-	INATOR'S STATION NUMBER 0013 EMP. C WET BULB 072 LUME x107	VIS. COD COD COD COD COD COD COD COD COD COD	DEPTH 10 BOTTOM 2834 ND. OBS. DEPTHS 12 SOU VELL 14 14	MAX. DEPTH OF STMPL'S 11 SPEC OBSERV.	DIR. 26	PO4-P	THER CODE X4	TYPE AM	ио3-и	STA NU. O	MBER 097
CTRY ID.	SHIP CODE EV	LATITU 4430 4430	DE LDI 1/10 0.5N 0.4	NGITUDE 1/1/10 SECOND S	MARSDEN SQUARE 10' 1' 149 48 WA' COLOR CODE	STATION TIME IGMT! MO DAY HR 06 06 2 FER WI TRANS. DIR. 20 5 %.	AE 1/10 25 1 ND SPEED OR FORCE S12 SIGMA	967 BARD METE Imbs 24 AT 0 0 8	CRUISE NO. 1 1 2 2 3 3 3 4 3 7 7 7 8 0 7 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	INATOR'S STATION NUMBER 0013 EMP. C WET BULB 072 LUME x107	VIS. COD 2 6 6 2 6 6 5 A D O O O O O O O O O O O O O O O O O O	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS 12 . SOU VELT 14 14 14	MAX. DEPTH OF S'MPL'S 11 SPEC OBSERV.	DIR. 26	PO4-P	THER CODE X4	TYPE AM	ио3-и	STA NU. O	MBER 097
CTRY ID.	SHIP CODE EV	LATITU 4430 4430	CARD TYPE SID OBS STD OBS	DEPTH (m) 0000 0010 0024	MARSDEN SQUARE 10° 1° 149 48 COLOR CODE 7 °C 0329 0329 0458 0518 0523	STATION TINIGMT! MO DAY HRR OF 18 A 18 A 18 A 18 A 18 A 18 A 18 A 18	AE Y 1/10 25 1 1 ND SPEED OR STORCE S12 SIGMA 260 260 260 260 260	967 BARD METE (mbs: 24 A-T 0 0 8 3 3	CRUISE NO. 1 AIR TO PRY BULB 19 BULB	STATION NUMBER OO 1 3 EMP. 'C WET BULB O 7 2 LUME TO 1 C C C C C C C C C C C C C C C C C C	VIS. COD 2 6 E △ D T T T T T T T T T T T T T	DEPTH TO BOTTOM 2834 ND. OBS. DEPTHS 12 SOUL VELL 14 14 14 14 14	MAX. DEPTH OF S'MPL'S 11 SPEC OBSERV. 0610 666 693 696	DIR. 26	PO4-P	THER CODE X4	TYPE AM	ио3-и	STA NU. O	MBER 097
CTRY ID.	SHIP CODE EV	CAST NO.	CARD TYPE SID OBS STD STD OBS STD OBS	DEPTH (m) 0000 0000 0010 0020 0024 0033 0047	MARSDEN SQUARE 10° 1° 149 48 WA' COLOR CODE 0329 0329 0329 0458 0518 0523 0464 0338	STATION TINE IGANT 100	25 1 ND SPEED SIGMA 262 262 260 260 260 260 370	967 BARD METE (mbs) 24 A-T 0 0 8 3 3 4 8	CRUISE NO. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NATOR'S STATION NUMBER O 0 1 3 EMP. © WET BULB O 7 2 WET STATION C C C C C C C C C	VIS. COD VIS.	DEPTH 10 BOTTOM 2834 ND. 085. DEPTHS 12 SOUVELE 14 14 14 14 14 14 14 14 14 14	MAX. DEPTH OF STMPL'S 11 SPEC OBSERV. 610 610 666 693 696 677 637	DIR. 26	PO4-P	THER CODE X4	TYPE AM	ио3-и	STA NU. O	MBER 097
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MESSENGR CAS		DEPTH (m)	7 ℃	s */.	SIGMA-T	SPECIFIC VOLUM	AE DYN. A X 10 ³	A. 1/51.0	DOLLA	02 ml/l	PD4=P µg = 01/1	101A L-P μg - σ1/I	ND2-N 19 - 01/1	ND3-N µg - al/l	\$1 D4\$1 yg + a1/1	pН	C
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006	OBS	0056	0173	33448	2677				559								
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006	OBS	0076	0225	33555	2682		10		586								
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		HR 1/10	T ND.	TY		DEPTH (m)	1 '	C	, ,	. 31	umn-	^	NOMALY-	-x10'	X	103	, AETI	DCITY		yg • 01/	1 µg + 01	/1	ig - 01/l	yg - at/L	pg - 6	91/1	
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		02	: 1	0.6	55 510	0030		1086	3296		644	(00160	22	0.0	53		509									
					510	0050		045	3322		667		00137		00	83	14	4497									
		0.2	21	0.6		0050	C	045	3322	0 2	2667							+497									
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		0 2	21	0.6	35 5TD	0098		781	3456 3454		2698 2699		00109	954	0.1	142		+825									
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					STD	1000		0395			2777		0004	369	0	65		4831									181
		0	21	0	85	1046		0393	349	35	2776						1,	4838									201

REFERENCE SNIP	LATITU	DE LON	IGITUDE ESC	MARSDEN SOUARE	STATION TIME	AE YEAR		ATION	DEPTH TO	MAX. DEPTH OF		WAVE RVATIONS	WEA- THER	CLOUD		12	IDDC ATION	
318016 EV	4423	1/10 N 04	748 W		06 07 0	36 196		16	3566	S'MPL'S		2 2	X 1	TYPE AM			D100	
		,		COLOR		SPEED BA	RO- AIR TEME	2. °C	ND.	SPECI	AL			, , ,			0100	
				CODE	(m)	FORCE (m)		106 6	12									
MESSENG		CARD	DEPTH (m)	T to	5 %.	SIGMA-T	SPECIFIC VOLUM	T = A =) ₂ ml/l	PO4-P	TOTAL-P	NO2-N	№03-И	SI D4-Si	рН	s
HR 1/10		TYPE					ANDMALY-X107	x 10 ³	. VELO	CITY		μg + αI/I	µg - o1/l	µg − ol/l	yg - at/l	µg - ol/l	P	c
		STD	0000	1244	3496	2649	0015478	0000				1	1			'		11
03	6	OBS STD	0000	1244 1253	34962 3501	2649 2651	0015319			95								
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03		STD OBS	0050 0074	1298 1246	3546 35391	2677 2682	0012976	0072		22								
03		STD	0075	1245	3539	2682	0012553	0104	150	07								
03		OBS STD	0100	1227	35385 3537	2685 2686	0012258			02								
03	6	STD OBS	0125 0148	1027 0906	3510 34916	2700 2706	0010928		148	392								
03	6	STD OBS	0150 0197	0901 0825	3490 34732	2706 2705	0010420	0191	148									
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03	6	085	T0293	0862	35084 3506	2726	0003020		149	02								
03	6	OBS	0390	0529	34857	2755			147	784								
		STD	0400 0500	0525 0486	3486 3487	2756 2761	0005897 0005470											
03	6	OBS STD	0583 0600	0454	34872 3487	2765	0005169	0518	147	788								
		STD	0700 0800	0428 0409	3488 3489	2768 2771	0004898											
03	6	OBS STD	T0819 0900	0406 0402	34895 3490	2772 2773	0004660	0663	148 148									
		STD	1000	0398 0393	3491 3492	2774 2775	0004624	0709	148	332								
0 4	4	085	1125	0392	34926	2776	0004300	0.55	148									
REFERENCE			. E	MARSDEN	STATION TIM	NE .	DRIGINAT	rDR'S	DEPTH	MAX.	V	VAVE	WEA-	CLOUD		N	IDDC	
CTRY ID. CODE	LATITUI	DE LON	GITUDE NOON	SQUARE	STATION TIM (GMT)	YEAR	CRUISE STA	TDR'S	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSER	VAVE RVATIONS	THER	CLOUD CODES		51.	ATION UMBER	
CTRY ID. CODE	4420	1/10		SQUARE 10° 1°	IGMT) MO DAY HR. 06 07 00	1/10 62 196	CRUISE STA	TION MBER	3795	DEPTH OF S'MPL'S	DIR H	RVA TIONS	THER	CODES		ST	ATION	
CODE NO. CODE	•	1/10	1/10 =	10° 1° 149 47	(GMT) MD DAY HR. 06 07 00 ER WII TRANS: DIR.	1/10 62 196 ND BAI SPEED ME	CRUISE STANO. NU	TION MBER	3795 No.	DEPTH OF S'MPL'S	OBSER	RVATIONS GT PER SE	THER CODE	TYPE AM		ST	ATION	
CTM ID. CODE NO. CODE 31,8016 EV	4420	1/10	1/10 =	10° 1° 149 47 WAY	MD DAY HR. 06 07 00 ER WII TRANS DIR.	YEAR 1/10 62 196 ND BAI SPEED MET OF IME	CRUISE STANO. 7 100 RD- RD- RER DRY BULB	TION MEER 17 C C VIS. WET CDDI BULB 106 6	3795 NO. 085. DEPTHS	DEPTH OF S'MPL'S	OBSER	RVATIONS GT PER SE	THER CODE	TYPE AM		ST	ATION	
CODE NO. CODE 318016 EV	4420	1/10	1/10 =	10° 1° 149 47 WAY	MD DAY HR. 06 07 00 ER WII TRANS DIR.	YEAR 1/10 62 196 ND BAI SPEED MET OF IME	CRUISE STANO. 7 100 RD- RD- RER DRY BULB	TION MEER 17 VIS. COOK BULB COOK 100 6	3795 NO. 085. DEPTHS	DEPTH OF S'MPL'S 12 SPECINOBSERVATION	OBSER	RVATIONS GT PER SE	THER CODE	TYPE AM	NO3~N yg - ot/1	ST	ATION	200
CTAY ID. CODE NO. CODE NO. CODE	4420	1/10 N 04	735 W	SQUARE 10° 1° 149 47 COLOR CODE	(GMT) MD DAY HR. 06 07 06 ER WII TRANS. DIR. 22 1	YEAR 1/10 62 196 ND SPEED MET OF FORCE Imit \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$1	CRUISE NU. 7 100 RO- AIR TEMP FER BULB 47 111 SPECIFIC VOLUMI ANOMALY—X10?	TION MEER 17 TO VIS. WET BULB 106 6 E SAD DOYN. M X 103	3795 NO. 085. DEPTHS (12	DEPTH OF S'MPL'S 12 SPECIAL DESERVATION OF CITY OF C	DIR H	PO4-P	THER CODE X 1	TYPE AM		SI O4-Si	ATION UMBER 0101	S C C
CODE NO. CODE 318016 EV	4420	CARD TYPE	735 W 735 W	149 47 COLOR CODE 1233 1233	GMT MO DAY HR.	YEAR 1710 62 196 ND SFEED OF FORCE Imit \$10 24 \$1GMA-T 2648 2648	CRUISE NO. STAND	17 . C WET CODE BULB CODE X 103	3795 NO. 085. DEPTHS 12 SOUN VELOCI 149	DEPTH OF S'MPL'S 12 SPECIAL DESERVATION DO CITY DESERVATION DESERV	DIR H	PO4-P	THER CODE X 1	TYPE AM		SI O4-Si	ATION UMBER 0101	5 C C
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CODE NO. CODE 318016 EV	4420	CARD TYPE STD OBS STD	735 W DEPTH (m)	10° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1°	GM1 MD DAY HR.	YEAR 1710 62 196 80 196 SPEED MES FORCE IM SIGMA-T 2648 2648 2652	CRUISE NO. NU CRUISE	NIDN MOER	3795 NO. 085. DEPTHS (VELOC	DEPTIH OF SYMPL'S 12 SPECIA DESSERVA OF OF OF OF OF OF OF OF OF OF OF OF OF	DIR H	PO4-P	THER CODE X 1	TYPE AM		SI O4-Si	ATION UMBER 0101	200
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10. 10. CODE	4420	N 04 CARD TYPE SID OBS SID SID OBS SID SID OBS SID SID OBS SID SID OBS	735 W 735 W	10° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1° 1°	MO DAY MR. O G O T O CER WITH TEAMS. DIR. 2 2 2 3 4 9 1 5 3 4 9 1 3 4 9 1 3 4 9 0 5 3 4 9 6 3 5 1 9 3 5 2 0 4 5 5 3 9	1/10 62 196 ND ND FORE: SIGMA-T 2648 2652 2654 2656 2668 2668 2682	CRUISE NO. NU CRUISE	NION MER	3795 NO. 085. 0EFTHS (DEFTHS (149 149 149 149 149 149 149	DEPTH OF STAPLIS 12 SPECIAL DESSERVATOR DESSERVATOR DESSERVATOR DESSERVATOR DESSERVATOR DESTRUCTION DE CONTROL	DIR H	PO4-P	THER CODE X 1	TYPE AM		SI O4-Si	ATION UMBER 0101	S C C
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REFERENCE CTRY 10.	SHIP	LATITU	DÉ	LONGITUOS	DC7R	ARSOEN SOUARE	STA	TION		YEAR	CRUISE		TION	-	TO TOM	MAX, DEPTH OF		WAVE ERVATIONS	WEA- THER CODE	CODES		S:	NODC ATION UMBER	
CODE NO.	CODE	•	1/10	* 1/10	Z 1	0" 1"	MO	DAY	HR,1/10		NO.	NU	AA BER	801	IIOM	S'MPL'S	DIR	HGT PER SE	A	TYPE AM	1		O IVI O EK	
31801	6 EV	4302	2 N	05007 W	1	50 30	06	07	185	1967	1	100		00	75	01	28	2 2	X4	7 8			0102	1
						W.A	TER		MINO	BAR	O+ AIR	TEMP.	. °C	15. N	10,	SPE	CIAL							
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	MESSENG TIME	CAST NO.	CAR		m)	T °C		s °/	SIC	SMA-T	SPECIFIC V		∑ ∆ DYN. X 1	M.	VELO		0 2 ml/i	PO4-P	FOTAL-P pg - 01/1	NO2←N µg - ot/I		SI O4~SI 19 - 01/1	рН	200
	100	-	1																					
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			S1	rD 002	0	0590		324		620	0018	304	004	+1		727								
	185		OB:	5 002	5	0522		324		628						700								
			S.	rD 003	0	0422	3	321	2	636	0016					659								
			S.	rD 005	0	0167	3	318	2	656	0014	812	0.0	90		551								
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REFERENCE	SHIP				Ĩ	NIFT	MARS		STA	TION	TIME	VC 4.0	L	ORIGI		_		DEPTH TO	DEPTH		WAVE	W EA-	CLOU			NODC	
CTRY 10.	COOE	LATITU		LONGITU		NON						YEAR	CRU		STAT		8	воттом	S'MPL	S OIR	HGT PER SE	CODE				NUMBER	
	-		1/10		1/10		10°				HR,1/10	106	-	-	001		-	0348	-	_	2 2	X 4	7 8	3		0103	
31 801	e EA	4252	N	05007	7 W		150		06	07	200 WIND	196		AR T			-	_	1 03		1-1-1	1 // 1	1		1	0 = 0 = 1	
								WAI		+	SPES	BAI		DRY	_	_	VIS,	NO, OBS.		ECIAL VATIONS							
								COLOR	TRAN:	S. OIR	FORC	//-		BULB	81	1 B		DEPTHS	OBSEK	V 110143							
										29	50	4 2	+0	106	0	94	1	0.8									
										1	-'-		1,000	IFIC VOI	110005	≥ (<u>۵</u>	T sol	UND		PO4-P	TOTAL-P	NO2-1	1 NO3-N	SI 04-5		S
	MESSENG TIME	OF ND.	CARO		EPTH (mΊ	T	°C	1	*/	\$10	T-AM	AN	OMALY-	x107		1. M. 10 ³		OCITY	O2 m1/1	yg = a1/1	1/10 - gu	yg - a1/				č
	HR 1/10			\rightarrow			-		+		-		-			-		+									\Box
					000	^	1	974	1 2:	362	1 2	594	1	0207	65	0.0	00	1 1 4	877		1	1	1	1	1	1	1 '
	2.0		\$1	_	000			974		361	_	594	01	0201	0 2	00	,00		877								
	20	10	0BS		001			976		388		614	0	0188	54	0.0	20		882								
			S1	-	002			977		+08		629		0174			38		887								
	2.0	10	083		002			978		+17		637	•						890								
	20	, ,	S1	-	003			946		+20		644	0	0160	61	00	55	14	879								
			Si		005			834	34	434	2	673	0	0133	67	0.0	84	14	1842								
	20	0.0	085		005	2	0	827	34	+35	9 2	675							840								
			S	TD	007	5	0	819	3	454	2	691	0	0117	0.2	0 1	115		+843								
	20	0.0	OB:	S	007	9	0	817	3	457	4 2	693							843								
			S	TD .	010	0	C	913	3	480	2	696	0	0112	46	0.3	144		+886								
	20	0.0	0В	S	010	5	0	926	3	484		697							+892								
			S	TD	012	5	0	897	3	486		703	_	0106			171		885								
			S	TD	015	0	C	848		487		712	0	0098	124	0.1	197		+870								
	20	00	0B:		015			832		487		715							4866								
					020			701		481		729	0	0082	57	0 4	242		4821								
	20	00	0B:	-	020			683		480		731		0077		0	201		4815								
					025			0626		481		739	0	0073	552	0.	281		4800								
	20	00	QB.	S	026	9	C	0620	3	481	1 2	740						14	4801								

REFERENCE	T SHIP T		T	- E	MARSDEN	STATION TIM	ME		OF	GINAT	DR'S	T	DEPTH	MAX.		WAVE	WE	A- CLOU			NODC	1
CTRY ID.	CODE	LATITU	1/10	LDNGITUDE BON	SQUARE	(GMT)	1/10	YEAR	CRUISE NO.		TIDN		TO MOTTOR	OF S'MPL'S		HGT PER S	0.00				STATION	
31801	6 EV	4248		05007 W	150 20		09	1967		1002	2.0		0805	08	27	1 2	X4				0106	
21-0	1				WA		IND	BAR	- A 11	TEMP.	°C	vis.	NO.	SPEC		11141	1 ^=	7 1 8 1 0		-	0104	
					COLOR	TRANS. DIR.	OR FORC			Y N		ODE	OBS. DEPTHS	DBSERVA								
						29	504	-	_	-		3	12									
	MESSENGP	C 1 1 1	CARD		1		1	, , 2 -4	SPECIFIC			_	sou			T	1			T		1.
	HR 1/10	NO.	TYPE	DEPTH (m)	T C	s °4.	SIG	MA-T	ANOMA	Y-X107	∑ ∆ DYN X 1	. M.	VELO		D 2 ml/l	PO 4-P pg - at/1	101AL- 99 - 01/					Č C
													1					1				\top
	'		ST		0931	3336		81	0022	009	00	00		857								
	209)	085 ST(0000	0931 0895	33358 3338		88	0021	225	00	7 2		857 846								
			ST		0841	3340		98	0020		00		14									
	209	?	085	0023	0822	33403		01	0017	7	0.0		148									
	209	9	08s	0030	0742	3364 34036		80	0017	246	00	61	14	794 751								
	200		ST		0605	3406		83	0012	388	00	91	14									
	209	7	08S	0071	0584 0587	34188 3421		95	0011	082	01	20	14									
	209)	085	0095	0616	34329	27	702					14	764								
			STO		0649	3442 3475		05	0010		01		141									
	209)	085	T0143	0795	34890		22	0009	400	0.1	12	148									
			ST		0769	3487	2.7	24	0008	675	01	95	148	340								
	209)	08S	0193	0643	34796 3480		36	0007	/ ₁ ½ 1	02	2.5	14									
			ST		0595	3482		744	0006		02		14									
	209	9	085	T0292	0560	34830		49						780								
	209		STI 085	0300	0552 0481	3483 34842		'50 '59	0006	317	03	04	14	778 765								
			STI		0478	3485		60	0005	411	03	62	14									
	200	,	STI		0448	3488		66	0004	948	04	14	14									
	209	,	08S	T0590	0428	34899 3490		70 70	0004	662	04	6.2	14									
			ST	0700	0419	3491		71	0004		05		147	791								
	209)	085 ST(0790	0411	34909 3491		72	0004	614	05	5.5	148									
	209)	085	0810	0413	34908		72	0004	014	0 2	,,	148									
REFERENCE	SHIP	LATITU	De l	LONGITUDE SEX	MARSDEN SQUARE	STATION TIA	ΛE	YEAR		GINAT		T	DEPTH	MAX. DEPTH	ORS	WAVE ERVATIONS	WEA	CLOUI			NODC	
CODE NO.	CODE	+	1/10	1/10		MO DAY HR	1.1/10	1600	CRUISE NO.		TION WBER		мотгом	OF S"MPL"S		HGT PER S	000				NUMBER	
318016	EV	4239	N C	05007 W	150 20	06 07 2	20	1967		1002	2.1		1554	11	27	1 2	X 4	7 8			0105	
					COLOR		IN D	BARG	J	TEMP.		VIS,	NO. OBS.	SPEC								
					CODE	(m) DIR.	FORC	4 - 4 -	BUI	8 8	ULB	ODE	DEPTHS	OBSERVA	HONS							
						27	505	24	0 08	9 (189	3	14							,		
	MESSENGR TIME	CAST NO.	CARD TYPE	DEPTH (m)	T *C	s	SIG	MA-T	SPECIFIC V	OLUME	∑ ∆ DYN.	. M.	SOU		O 2 ml/l	PO4-P ug - 01/1	TOTAL-			\$1.04-5 yg + at/		200
	HR 1/10				-						X 1	0,				-			+	-		\mathbb{H}
	!		ST	0000	0996	3340	25	73	0022	713	00	00	146	382						1	1	11
	220)	085	0000	0996	33400		73					148									
			STO		0933	3338 3336		91	0021		00		148									
	220		OBS	0025	0827	33346		96	0022		-		148	322								
			STE		0786	3340 3363		06	0019		00		148									
	220		085	0051	0620 0612	33644		47	0015	104	00	79	14									
			STO	0075	0807	3466	27	02	0010	645	01	33	148	340								
	220)	OBS STI	0076	0808 0662	34676 3448		03	0010	039	01	5.8	148									
	220)	085	0102	0653	34474	27	09					14	782								
			STE		0633	3451		14	0009		011		147									
	220		STO OBS		0611 0607	3455 34553		20	0008	y56	021	16	147									
			STE	0200	0749	3499	27	36	0007	588	02	47	148	342								
	220)	085 ST:		0755 0626	35019 3493		38	0006	445	04	8.2	148									
			STI		0533	3489		57	0005				141									
			016	0000	9222		21	21	0000	040	03	7 7	2.14	112								
	220)	OBS STO	T0308	0523 0501	34885 3494	27	58	0005		03		14	769								

0>07

STO

T0817

T0611

STD

STD

2772

2775

2775

																							_			
CE			LATITUDE LONGITUDE			MAR	SDEN	STATI				(DRIGINA	TOR*S		DEPTH	MAX. DEPTH	0.0	WAVE SERVATIONS	WE		OUD			NODC	
D.	CODE		OE SO			S soi	JARE		GMT1		YEAR	CRUISE		ATION		TO MOTTOR	OF	1		COL	30	AMT	ļ		UMBER	
10.	0000	•	1/10	<u> </u>	1/10	10°	1"	MO D	AY	1R,1/10		NO.	-	MBER	-		3 MITE .				STPE	+				
16	EV	4229	I N	05007	W	150	20	06 0	8	001	1967		100		-	2195	11	27	2 2	X	4 7	8	1	-	0106	
							WA	TER		ONIW	BARO		AIR TEM		VIS.	NO.	SPE	CIAL								
							COLOR	TRANS,	OIR.	SPEED	M ET ER		ULB	BULB	CODE	OBS. DEPTHS	OBSERV	2 NOIT A'								
							CODE			FORCE	+	-	-		1	12										
			-						28	506	231	/ 0	194	089	1	12			1						Т	Τ.
	MESSENG		CAR		PTM (m)		r tc	5	٠/	SIGA	T-AA		ALT-IIO	DY	A. D.		ONU	O2 ml/	PO4-P	TOTAL			NO3-N	SI O4~S1 pg - 01/I	pH	
	TIME HR 1/10		TYP	E								AROM	12(1-210	X	103	VEL	JUILI		pg = 01/1	h8 - 01	N pg -	01/1	νg - οΙ/Ι	pg - 007		1
																						ļ				
	l	1	51	rD c	0000		1021	33:	33	25	63	002	3647	00	00	14	890									
	0.0	1	OB:		0000		1021		328	25	63					14	890									
					010		0890	33:	34	25	86	002	1535	0.0	23		844									
					020		0788	33	35	26	0.2	001	9989	00	143		806									
	00	1	0B	5 (026		0740	33	362	26	10						789									
			S		0030		0728	33			17		18549		63		786									
			S	TD (050		0661	33	78	26		001	15173	3 00	96		767									
	0.0	1	0B:	5 (052		0654		812		57						765									
					0075		0563	34			91	001	11619	9 01	130		736									
	0.0	1	08:		0078		0556		140					0.1	156		734									
					100		0541	34			17	000	19224	. 0	100		736									
	0.0	11	0 B		105		0539	34	433		26	0.00	8402	2 0	178		742									
					125		0545	34			32		7843		198		751									
	0.0	. 1	0B:		1158		0554		626			000	, , , , ,	, 0.	- , 0		753									
	00	1 1		~	0500		0542	34			43	000	06821	0.	435		757									
	0.0	. 1	0B.		0209		0540		744		45	000					757									
	0.0	/ L			250		0529	34			50	0.00	628	1 0	268	14	760									
					3300		0516	34			54		15890		198		764									
	0.0) 1	08		0314		0513		843		56						765									
	0.0			_	0400		0494	34			62	000	0530	1 0	354	14	772									
	0.0	1	08		0418		0489	34	892	2 27	62					14	773									
					0500		0456	34	90	27	67	000	0489	_	405		773									
			S	TO (0600		0425	34	90	27	70	000	04630	5 0	453		+777									
	10	01	0 B	S T	0625		0418		90		71						778									
			S	TD (0700		0404				73		0446		498		785									
					0800		0389	34			74	000	0438	1 0	542		795									
	0.0	0.1	08		0836		0385		904		75		0122		- 0.0		799									
					0900		0379				76		04310		586		1807									
					1000		0372	34			77		0431		629 678		+821 +837									
					1100		0370				78	00	0430	4 0	0 1 6		+845									
	2.0	0.1	0 B	S	1149		0370	34	925	0 61	78					1.4	0040									

REFERENCE SHIP		W N	ARSDEN	STATION TI			DRIGINA			DEPTH	MAX. DEPTH	085	WAVE ERVATIONS	WEA	CLOUD			NODC	
CTRY ID. CODE LATITU		02	OUARE		YEA	CRUISE NO.		L MBER		TO BOTTOM	OF S*MPL*S			CODE	TYPE AM			TATION	
100.	1/10			MO DAY H		_	-						HGT PER S			1		.1.7	
31 8016 EV 4209	N O O	007 W 1	-		27 196		100		,	3109	11	29	2 2	X 4	7 8	}	-	0107	
			WAT			A K U = }	AIR TEN		VIS.	NO.	SPEC								
			COLOR	TRANS. DIR.			DRY ULB	W ET	CODE	DEPTHS	OBSERV.	SHOTE							
				29		244 0	94	094	1	12									
					T			. 5	ΔD	T			T			NO N	100 0		S
MESSENGR CAST	CARD	DEPTH (m)	7 °C	s °/	SIGMA-1		ALY-X10	DY	N. M.	VELC	CITY	0 2 ml/l	PO4-P pg - ot/l	10TAL-P	NO2-N ug - ol/l	NO3-N yg - o1/I	SI O4-Si 1/10 - QU	pН	CC
HR 1/10						_		- X	10-	+	-			1	-		-		+
	_			1	0.550					1	- 35				l			1	11
0.37	STD	0000	1112	3348 33480	2559 2559	002	403	3 ()(000		925 925								
027	OBS	0000	1005	3358	2586	003	1545	5 00	023		889								
	STD	0020	0899	3366	2609		932)43		853								
027	0BS	0026	0836	33714	2623	001	, , , , , ,		272		831								
021	STD	0030	0780	3373	2633	0.01	7096	5 00	061		810								
	STD	0050	0583	3388	2671		3469		92		737								
027	OBS	0052	0571	33897	2674					14	733								
	STD	0075	0536	3426	2707	001	010	9 0	121	14	727								
027	085	0078	0535	34297	2710						728								
	STD	0100	0566	3447	2720	000	892	0	145		746								
027	085	0104	0569	34498	2722				_		749								
	STD	0125	0555	3454	2727		829		167		747								
	STD	0150	0543	3460	2733	000	774	0	187		747								
027	OBS	T0154	0542	34608	2734	000			222		747								
0.27	STD	0200	0542	3474 34750	2744 2745	000	674	5 U	223		757 758								
027	OBS STD	0207 0250	0500	3476	2751	000	616	5 0	255		748								
	SID	0300	0474	3479	2756		569		285		746								
027	OBS	T0313	0471	34798	2757	000	- 5)	, ,			747								
V 4 1	SID	0400	0496	3493	2765	000	502	7 0	339		773								
027	OBS	0414	0498	34949	2766						777								
	SID	0500	0480	3496	2769	000	475	1 0	388	14	784								
	STD	0600	0458	3497	2772	000	454	1 0	434	14	791								
027	085	T0620	0453	34967	2772						793								
	STD	0700	0427	3494	2773		446		479		795								
	STD	0800	0403	3493	2775	000	435	2 0	523		801								
027	OBS	T0827	0398	34922	2775				_		803								
	STD	0900	0397	3493	2775		439		567		815								
	STD	1000	0395	3494	2776)440		611		831								
	STD	1100	0394	3494	2777	000)442	9 0	655		847								
027	OBS	1138	0393	34945	2777					14	853								

																	,					
REFERENCE	SHIP			# # E	MARSOEN	STATION TI	M E	YEAR		RIGINA			DEPTH	MAX. DEPTH	085	WAVE ERVATIONS	WEA-	CLOUD		,	NODC	
CTRY ID.	CODE	LATITU	DE 1/10	LONGITUDE TO SE		MO DAY H	R.1/10	TEAR	CRUISE NO.	\$1.	ATION JMBER		ваттом	OF S'MPL'S	DIII.	HGT PER SEA	CODE	TYPE AMI	·	١	UMBER	
31801	7 EV	3727		05024 W	114 70		20	1967	IIP	100	24		5286	15	21	0 2	X1	0 3			0001	
1 21001	, - v I	2121	'*	0,02	WA		IND	BARC		R TEM		_ `	NO.	SPEC		1 - 1	•		•			
					COLOR	TRANS. DIR.	SPEED OR FORCE	METE	R DI		WET	VIS.	OBS. DEPTHS	OBSERV								
					CODE	lm1 Ond				-			30									
		_			OT	SD 21	508	3.2	9 27	(8	244	8								_	Т	1.
	MESSENGR TIME	CAST	CARD	DEPTH (m)	1 °C	s */	SIG	MA-T	SPECIFIC ANOMA	VOLUM	E S	A D	SOL	DCITY	O2 m1/1		OTA L-P	NO2-N ug - at/1	NO3-N µg - a1/l	SI 04-Si vg - al/	pH	Š
	HR 1/10	NO.	TYPE				_		A110711A		,	103	V 6 L C	,,,,,,		pg = 0//1	pg - 0//1	10 - 001	pg = 017 t	pg - 411	-	#
											- 1		1				ļ				ļ	
			ST		2606	3645		13	003	7981	1 0	000		389 389								
	12	0	OBS OBS		2606 2517	36448 36451		13						369								
			ST		2508	3641		40	003	5401	1 0	037	15	368								
	00	5	OBS	0010	2508	36410		40	_					368								
			ST		2371	3646		85	003	1171	1 0	070		337								
			OBS		2371 2260	36458 3652		85	002	7673	3 0	099		337 312								
			ST OBS		2260	36522		22	002			.,,		312								
			ST	0 0050	2115	3646	2.5	58	002	4336	5 0	151		277								
			OBS		2115	36458		58		005		107		277								
			ST		1973 1973	3657 36573		05	001	7758	5 0	207		245 245								
			OBS		1917	3658		20	001	8590	0 0	255		233								
			085		1917	36582		20						233								
			ST		1858	3656		33	001	7433	3 0	300		221								
			OBS		1858	36555		33	0.0.1	710	2 4	343		221								
			ST		1838 1838	3654 36542		537 537	001	113	2 0	242		219								
			OBS ST		1797	3650		544	001	664	3 0	428		215								
			089		1797	36498		544					15	215								
			S1	rD 0250	1778	3652		551	001	621	9 0	510		218								
			OBS		1778	36518 3650		551 553	001	614	3 0	591		218								
			S1 0B5		1763 1763	36503		553	001	014.	5 0	771		221								
			51		1744	3648		556	001	620	6 0	752		232								
			OB5	0400	1744	36479		556						232								
			089		1743	36453		554	001	4311	0 0	915		238								
			S1 0B5		1690 1690	3633 36334		558 558	001	631	o U	715		231								
			S1		1560	3609		570	001	5420	0 1	074		205								
			OBS	0600	1560	36092	26	570						205								
			51		1417	3587		584	001	424	3 1	222		173								
			OBS		1417 1403	35865 35888		584 588						173								
			OBS		1300	35702		595						144								
			SI	-	1240	3555	26	595	001	318	0 1	359	9 15	127								
			0B	5 0800	1240	35547		695				, -		127								
			5		0996	3528		720	001	075	9 1	479		054								
			OBS		0996 0824	35280 35142		720 737						0000								
			0B3		0834	35172		738						007								
				TD 1000	0800	3515	2	741	000	854	7 1	575		996								
			QB:		0800	35153		741			, .			+996								
				TD 1100	0599	3500 34995		757	000	678	4]	652		+932 +932								
			0B:	S 1100 TD 1200	0599 0513	34995		757 767	000	578	7 1	719		+932 +914								
			0B:		0513	34983		767	500			-		4914								
				TD 1300	0471	3497	2	771	000	542	8 1	77		+913								
			0В:		0471	34969		771		E 3.		0.5		4913								
			_	TD 1400 S 1400	0460 0460			774 774	000	521	2	82		4926 4926								
			OB S	TD 1500	0460			776	000	501	1	187		4936								
			08		0443			776		-				4936								

											,								
REFERENCE	SHIP (A 711		F #	MARSDEN	STATION TIE		OR	GINAT	OR"S	OEPTH	MAX.	000	WAVE ERVATIONS	WEA-	CLOUD		1	ODC	
CTRY 10	ODE LATIT		NGITUDE BO	SOUARE	(GMT)	YEAR	CRUISE NO.	ATZ	TION	BOTTO	, OF	L		THER	1	ļ		ATION	
COOE NO.		1/10	1/10	10° 1°	MO DAY HE	1,1/10	NO.	NU	WREX		S'MPL'S	DIR.	HGT PER SEA		TYPE A MI				
318017	EV 372	7 N 05	024 W	114 70	07 25 1	41 1967	IIP	100	24	5286	34	21	0 2	X1	813			0002	
				WAT	ER W	INO BAR	On Als	TEMP.	. °C VIS.	NO.	CDE	CIAL							
				COLOR		SPEED MET	ER OR		WET COD	OBS.	OBCCOV	2 NOIT A							
				CODE	Im1	FORCE (mb	s) 9U6	.8 1	BULB	-	1								
					21	508 32	9 27	8	244 7	07	1								
T _M	ESSENGR CAST	CARD					SPECIFIC V	OLUME	∑ ∆ O DYN, M	50	OUNO		PO ₄ -P	TOTA L-P	NO ₂ -N	NO3-N	SI O4-Si		s
	TIME OF NO.	TYPE	DEPTH (m)	T °C	5 %.	SIG MA-T	ANOMA		X 103	· VEI	LOCITY	O2 m1/l	yg = 01/1	μg - α1/1	µg - 01/1	μg - αI/I	μg - o1/I	pН	C
H	R 1/10	-				-			1	+			-		_				+
				1	1	l				1			1						
		STD	0000	2610	3649	2414	0037	827	0000		390								
	141	085	0000	2610	36486	2414	0077	0.7	000		5390								
		STD	0010	2581	3648	2423	0037		0037		5385								
		STD	0020	2552 2524	3647 3646	2431 2439	0036		0074		5380 5375								
		STD	0030	2467	3643	2454	0033		0110		5365								
		STD	0075	2398	3641	2473	0034		0263		5352								
		OTS CTS	0100	2329	3638	2491	0030				5339								
		STD	0125	2262	3635	2509	0029				5326								
		STD	0150	2196	3633	2526	0027				5313								
		STO	0200	2068	3627	2557	0025		0621		5287								
		STD	0250	1944	3622	2586	0022		0740		5261								
		STD	0300	1825	3616	2612	0020		0846		5235								
		STD	0400	1602	3604	2656	0016				5184								
		STO	0500	1399	3592	2692	0012				5135								
		STD	0600	1214	3579	2719	0010	399	1289	1	5088								
		STO	0700	1049	3566	2740	0008	503	1383	1	5045								
		SID	0800	0904	3553	2755	0007	137	1462	1 :	5007								
		STD	0900	0777	3539	2763	0006	273	1529	1	4974								
	141	OBS	0978		35274														
		STD	1000	0670	3523	2766	0005				4947								
		STD	1100	0582	3506	2764	0006	064	1650) 1	4926								
		STD	1200	0514	3494	2763	0006	116	1711		4914								
	141	OBS	T1205	0511	34933	2763					4913								
		STD	1300	0493	3495	2767	0005	867	177		4922								
		STD	1400	0475	3497	2770	0005		1828		4932								
		STD	1500	0459	3498	2773	0005	391	188		4942								
	141	OBS	T1627	0439	34991	2776					4955								
		STD	1750	0421	3498	2777	0002				4968								
		STO	2000	0390	3497	2779	0004	968	2140		4998								
	141	OBS	T2053	0385	34964	2779					5004								
		STD	2500	0358	3496	2782	0004	949	2388		5069								
	141	OBS	T2516	0357	34964	2782		010	24.21		5072								
		STD	3000	0321	3495	2785	0004	843	263		5140								
	141	085	3434	0284	34939	2787				1	5199								

REFERENCE	SHIP					# H	MARSDEN	STATION 1	IM E	45.5	_	ORIGIN.			DEPTH	MAX.	000	WAVE	WEA-	CLOUD			NODC	1
CODE NO.	CODE	LATITU	1/10	LON	GITUDE '1/10	DRIFT	10" 1"	MO DAY		YEAR	CRUISE NO.	2	TATION	İ	BOTTOM	OF S'MPL'		HGT PER SEA	THER	TYPE AMI	Į		STATION	
31801	7 EV	3756		05	022 W	\Box	114 70		188	1967	+	1	025		5303	15	20	1 2	X1	0 3			0003	
	1 1		1			1	WA		GNIN	BAR		AIR TEA			NO.		_	- -	1 // *	1 012	r	- 1	0000	1
							COLOR	TRANS. DIR.	SPEER	MET	ER	ORY	WET	COD!	One	OBSERV	CIAL							
							CODE	(m)	FORC	_		IULB	9018	-										
							DT	SD 20	512	2 32	9 2	7	24	7	27									
	MESSENGR TIME	CAST NO.	CAR	CS	DEPTH ((m)	r °c	5 %.	SIG	MA-T	SPECIFIE	C VOLU	ME 2	A D	SOL	TIDO	02 ml/l	PO4-P	TOTAL-P	NO2~N	ноз−и	5104-5		S
	HR 1/10	1						-	_					(10 ³	7160			yg + e1/1	yg • o1/l	νg - αl/1	µg - 01/1	yg - al/	1	c
																_								
	188	0	S OB	TD	000		2588 2588	3658 36575		+28 +28	00:	3653	0 0	000		386 386								
	100	0		TD.	001		2305	3647		505	002	2924	1 0	033		319								
			0В.		001		2305	36465		505						319								
				TD	002		2186	3649		41	002	2586	7 0	060		291								
	002	2	08	S TD	002		2186 2067	36490 3647		541 572	003	2292	6 0	085		291 262								
			08		003		2067	36470		572	002	. 272	0 0	000		262								
			S	TD	005	0	1905	3651	26	518	001	863	6 0	126	15	221								
			OB.		005		1905	36510		18				1		221								
			0B	TD S	007		1823 1823	3650 36495		38	001	1684	9 0	171		202 202								
				TD	010		1798	3650		544	001	630	5 0	212		199								
			08		010		1798	36500		544					15	199								
				TD	012		1790	3652		547	001	1608	7 0	253		201								
			0В.	S TD	012		1790 1780	36516 3651		647 649	0.01	598	0 0	293		201 202								
			08		015		1780	36510		649	001	. 270	0 0	493		202								
			οв.		016	0	1776	36510		50						202								
			0 B		017		1757	36451		51	0.01	E 0.4		3 - 7		198								
			0B:	TD S	020		1752 1752	3646 36461		553	001	584	8 0	372		201 201								
				TD	025		1746	3646		54	001	588	5 0	452		208								
			08:		025		1746	36460		54						208								
				TD	030		1743	3645 36448		54	001	607	0 0	532		215								
			0B:	5 T0	040		1743 1695	3637		54	0.01	586	1 0	691		215 216								
			OB:		040		1695	36368		59	001			- / 1		216								
			08:		045		1640	36230		62						206								
				TD	050		1555	3607		69	001	519	1 0	846		186								
			0B:	S TD	050		1555 1405	36066 3582		69	001	402	6 0	993		186 152								
			0B:		060		1405	35821		83	001			. , ,		152								
				СТ	070		1264	3564		97	001	276	3 1	127		119								
			0B:		070		1264	35635		97	0.01	007	7 1	2 / 5		119								
			08:	TD S	080		1047 1047	3536 35360		717	001	087	, 1	245		057 057								
				T D	090		0805	3504		732	000	927	9 1	345		980								
			0В:		090		0805	35040		32						980								
				TD	100		0653	3508		156	000	684	5 1	426		938								
			0B:	S TD	100		0653 0560	35075 3503		756 765	000	1596	6 1	490		938 917								
			0B:		110		0560	35031		65	000	, , , , ,	- 1	. , 0		917								
			S	TO	120	0	0492	3503	27	773	000	519	2 1	546	14	906								
			OB:		120		0492	35025		773		S C C	, .	L 0 -		906								
			0B.	TD S	130		0461 0461	3501 35008		775 775	000	500	/ 1	597		910 910								
				TD	140		0443	3501		777	000	486	0 1	646		910								
			0B:	S	140	0	0443	35009	21	777					14	919								
				TD	150		0424	3500		778	000	476	8 1	694		928								
			OB:	5	150	U	0424	35000	2	778					14	928								

									-					MAX.					1			
CTRY ID.	SHIP L	ATITUDE	LON	AGITUDE PER STORY	MARSDEN SQUARE	STATION TIA		YEAR	CRUISE		TION	\dashv	DEPTH TO BOTTOM	DEPTH		WAVE ERVATIONS	THER CODE	CODES			NODC STATION NUMBER	
CODE NO.		1/		17 10	- 10	MO DAY HR			NO.		MBER	-		S.W bras	_	HGT PER SE	^	TYPE A M				
31 801	7 EV 3	826 h	1 05	026 W	114 80		18	1967	4 10	TEMP.			5394 NO.	15	23	2 2	X1	013	1	-	0004	l
					COLOR	TRANS. DIR.	SPEED OR	M ET Lmb	ER DRY			VIS.		SPE(OBSERV								
					DT		512	31	-	\rightarrow	240	7	27									
	MESSENGR				T			1 - 2	SPECIFIC V				sou	I D		PO ₄ -P	TOTAL-P	NO ₂ -N	NO3-N	SIDa-S		5
		NO.	CARD TYPE	DEPTH (m)	T °C	s */	SIGN	T-A	ANOMAL	r=x10 ⁷	DYI	△ D N. M 10 ³	VELO	CITY	O2 m1/1	μg - α1/1	νg - αl/l	μg ~ at/l	1403-14 1/1a - gv	μg - α1/		C
	HX 1710					-																\sqcap
	'	- 1	STD	0000	2627	3621	23		0040	329	00	000		391								
	218		DB\$	0000	2627	36209	23							391								
		(DBS	0005 0010	2460 2456	36152 3634	24		0034	377	0.0	37		353 355								
	004		STO	0010	2456	36343	24		0034	211	00	101		355								
	004		DBS	0012	2463	36463	24							358								
			STD	0020	2436	3646	24		0033	030	0.0	71		353								
		(OBS	0020	2436	36456	24							353								
			STD	0030	2317	3648	25		0029	530	0.	02		326								
			DBS DBS	0030 0032	2317	36482 36499	25	-						326 308								
		,	DBS STD	0050	2157	3652	25		0024	973	0.1	57		289								
		(DBS	0050	2157	36523	25			. , ,		,		289								
			STD	0075	1924	3643	26		0019	787	04	213		229								
		(DBS	0075	1924	36428	26							229								
			STD	0100	1832	3648	26		0017	239	04	259		208								
		1	OBS	0100	1832	36483	26		0016	270	0.3	2 0 1		208								
			STD	0125 0125	1795 1795	3649 36492	26 26		0016	314	0.	301		202 202								
		,	STD	0150	1780	3651	26		0016	002	0.3	342		202								
			OBS	0150	1780	36507	26							202								
			STD	0200	1773	3652	26		0015	937	04	+21	15	208								
		1	OBS	0200	1773	36517	26							208								
			STD	0250	1757	3649	26		0015	897	0 :	01		211								
		1	OBS	0250 0300	1757 1741	36494 3647	26	54 56	0015	971	0.6	80		211 215								
			STD	0300	1741	36469	26		0015	011	0.	- 00		215								
			STD	0400	1696	3638	26		0015	834	0	739		216								
			OBS	0400	1696	36375	26						15	216								
			STD	0500	1571	3614	26	71	0015	025	0 8	393		192								
		4	OBS	0500	1571	36138	26							192								
			STD	0600	1405	3584	26		0013	895	10	38		152 152								
		'	OBS STD	0600 0700	1405	35839 3559	26 27		0012	223	1.3	168		104								
			OBS	0700	1220	35590		03			-			104								
			STD	0800	1030	3536	27	20	0010	606	1	283	15	051								
			OBS	0800	1030	35355	27							051								
			STD	0900	0806	3513		39	0008	637	1.	379		981								
			OBS	0900 1000	0806 0590	35130 3497	27	39 56	0006	71/	1.4	456		981 911								
			STD OBS	1000	0590	34969		56	0000	114	Ι.	٠,٠٥		911								
			STD	1100	0531	3501		67	0005	689	1:	18		905								
			obs	1100	0531	35014	27							905								
			STD	1200	0544	3512		74	0005	221	1:	572		928								
			OBS	1200	0544	35119		74						928								
			STD	1300	0503	3509		76	0004	987	1	623		928								
			OBS	1300 1400	0503 0464	35089 3506		76 78	0004	808	1	672		928 928								
			STD	1400	0464	35055		78	0004	000	1	- 12		928								
			STD	1500	0442	3505		80	0004	647	1	719		936								
			овѕ	1500	0442	35050		80					14	936								

REFERENCE	T. I		- =	MARSDEN	STATION TIA	AE .	ORIGINATO	R*S	DEPTH MA	1	WAVE	WEA-	CLOUG			NODC	
CTRY IO.	CODE	ATITUDE	LONGITUDE ES	SOUARE	(GMT)	YEAR	CRUISE STAT		10 0	F V°	SERVATIONS	THER	COOES		5	TATION	
CODE NO.		1/10	1/10 ==	10" 1"	MO CAY HR	,1/10	NO. NUA	NBER	IWIS WOLLOR	L°S DIR	HGT PER SE	A COO!	TYPE A.M.			OMOEK	-
31801	7 EV 3	826 N	05026 W	114 80	07 25 2	37 1967	11P 1002	6	5394 4	5 23	2 2	X1	8 6			0005	1
·				WAT	ER W	IN O BAR	O- AIR TEMP.	°C VIS.	NO. ,	PECIAL							
				COLOR	TRANS. OIR.	SPEED MET	ER ORY W	LET COOE		RVATIONS							
				COOE		FORCE (mb		-	<u> </u>								
					22	512 31	2 260 2	40 7	07								
	MESSENGR	AST CARC	DEPTH (m)	7 %	s °/	SIGMA-T	SPECIFIC VOLUME	₹ ∆ a	ZOUND	O2 ml/l	PO ₄ =P	TDTAL-P	NO2-N	NO3-N	\$104-5	pH	S
	HR 1/10 T	NO. TYPE	DEFIN (III)	' "	1	310/11/4-1	ANOMALY-1107	x 10 ³	VELOCITY	02	μg = α1/1	νg = n1/1	μg = at/l	μg − αt/	µg - 01/	"	č
	100			1													П
		ST	0000	2620	3617	2387	0040399	0000	15389		1					'	, ,
	237	085		2620	36170	2387	00 40277	0000	15389								
	271	ST		2594	3616	2395	0039736	0040									
		ST		2568	3614	2401	0039148	0080	15380								
		ST		2542	3613	2409	0038494	0118	15376								
		ST	D 0050	2490	3611	2423	0037200	0194	15367								
		ST	D 0075	2427	3608	2440	0035701	0285	15355								
		ST	0 0100	2364	3604	2455	0034303	0373	15344								
		ST	D 0125	2303	3601	2471	0032916	0457									
		ST		2242	3598	2486	0031555	0537									
		ST		2124	3593	2515	0028945	0689									
		ST		2010	3587	2542	0026607	0827									
		ST		1900	3581	2566	0024459	0955									
		ST		1692	3571	2610	0020550	1180									
		ST		1499	3561	2646	0017268	1369									
		ST		1322	3552	2677	0014498	1528									
		ST		1160	3544	2703	0012158	1661	15081 15045								
		ST		1015	3536 3529	2723 2739	0010301	1774									
		ST		0885 0771	3529	2751	0007593	1869	_								
		ST ST		0672	3517	2761	0007593	2022									
		51		0589	3512	2768	0005857	2084									
		ST		0522	3507	2773	0005391	2140									
	237	085		0502	35061	2774	0000011	2-40	14933								
		ST		0480	3504	2775	0005138	2193									
		ST		0450	3501	2776	0005048	2244									
	237	085	T1659	0411	34978	2778			14949								
		ST	D 1750	0403	3497	2778	0004932	2368	14961								
		ST	D 2000	0383	3497	2780	0004869	2491	14995								
	237	OBS	T2233	0365	34962	2781			15027								
		ST	D 2500	0348	3496	2783	0004816	2733	15065								
	237	085	12788	0328	34961	2785			15106								
		ST	D 3000	0309	3495	2786	0004658	2970	15135								
	237	085		0280	34924	2786			15189								
		ST		0246	3490	2788	0004553	3430									
	237	088	4510	0231	34894	2788			15366								

REFERENCE		- E	MARSDEN SOUARE	STATION TO	ME YEAR	DRIGINA		DEPTH TO	MAX. DEPTH	WAVE OBSERVATIONS	WEA- THER	CLOUD			NODC	
CODE NO. CODE LATIT	1/10	ACITUDE POPUL		MO DAY H			ATION JMBER	BD TTO AA	OF S'MPL'S	DIR HGT FER SE	CDDS	TYPE AM			UMBER	
318017 EV 385	1 N 05	015 W	114 80	07 26 0	37 1967	11P 100	27	5358	15	20 1 2	X1	0 3			0006	
			WA.		IND SAF		V15.	NO, OBS.	SPECIA	L						
			COLOR	TRANS. DIR.	SPEED MET		WET COD	DEPTHS	II AVRBZ8C	ONS						
			DT	SD 20	\$12 30)8 24	23 7	25								
MESSENGR CAST	CARO	DEPTH (m)	1 °C	s */	SIGMA-T	SPECIFIC VOLUM	£ ≦ △ D DYN. M	SOUN	4D 0	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4~Si	l	5
HR 1/10	TYPE	DEPTH (m)		3 %	SIGMA-I	ANDMALY-X10	X 10 ³	VELDO	CITY	yg - 01/1	уд + a1/l	νg - at/l	01/1 - ولا	νg + αΙ/ί	рН	c
0.27	STD	0000	2569	3580 35802	2376 2376	0041528	0000									
037	OBS OBS	0000	2569 2520	36050	2409			153 153								
	STD	0010	2535	3625	2420	0037328	0039									
002	085	0010	2535	36252	2420			153								
	STD OBS	0020	2443	3632 36315	2453 2453	0034246	0075	153 153								
	STD	0020	2263	3662	2529	0027048	0106									
	085	0030	2263	36620	2529			153	14							
	STD	0050	2200	3673	2555	0024663	0158									
	OBS STD	0050 0075	2200 2080	36725 3663	2555 2581	0022290	0216	153 152								
	DBS	0075	2080	36628	2581			152								
	STD	0100	1956	3655	2608	0019804	0269	_								
	08S STD	0100 0125	1956 1926	36548 3662	2608 2621	0018643	0317	152 152								
	08\$	0125	1926	36618	2621	001004.	, 0211	152								
	STD	0150	1879	3656	2629	0017989	0363									
	08S STD	0150 0200	1879 1835	36561 3657	2629 2640	0017033	0450	152 152								
	085	0200	1835	36570	2640	001103	, 0+50	152								
	STD	0250	1794	3654	2648	0016433	0534									
	OBS	0250	1794	36541	2648	001/31	0614	152								
	STO OBS	0300	1774 1774	3652 36515	2651 2651	001631	0616	152 152								
	STD	0400	1755	3652	2656	0016206	0778									
	085	0400	1755	36515	2656	001/33	00/1	152								
	STD OBS	0500 0500	1726 1726	3645 36449	2658 2658	0016331	0941	. 152 152								
	STD	0600	1517	3603	2674	0014924	1097									
	085	0600	1517	36029	2674			151								
	STD 08s	0700 0700	1274 1274	3564 35639	2696 2696	0012933	1237	7 151 151								
	STD	0800	0990	3527	2720	001055	1 1354									
	085	0800	0990	35265	2720			150	35							
	STD	0900	0763	3509 35090	2742	0008249	1448									
	05S STD	0900 1000	0763 0655	35090	2742 2757	0006769	1523	149 149								
	085	1000	0655	35090	2757	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		149								
	STD	1100	0580	3513	2770	0005559	1585									
	OBS STD	1100 1200	0580 0494	35125 3504	2770 2773	0005146	1638	149 149								
	085	1200	0494	35035	2773	0000140	, ,,,,,	149								
	STD	1300	0495	3512	2780	000465	7 1687									
	OBS	1300 1400	0495 0457	35119 3506	2780 2780	000464	7 1734	149 149								
	STD	1400	0457	35064	2780	000464	1134	149								
	STD	1500	0430	3504	2781	0004564	1780	149	31							
	085	1500	0430	35039	2781			149	31							

																		_	_			
REFERENCE	SHIP	LATITU	05	LONGITUOE	MARSDEN	STATION T	ME	YEAR		RIGINA			DEPTH	DEPT		WAVE	WEA- THER	CLOUD			NOOC	
CINY IO.	CODE	4	1/10	LONGITUOE	10° 1°	MO DAY H		11,000	CRUISE NO.	\$1 34	TATION UMBER	1	BOTTOM	S'AN PL		HGT PER SE	CODE	TYPE AM	2		NUMBER	
	7 EV	3918		05010 W	114 90		072	1967	1				5431	15		2 2	X1	0 3			0007	
31801	d cal	3910	IA I	ODOIO WI I	114 40		VIND		1	IR TEM		T				12121	1 × 1	1 013	1	-	0007	
					COLOR	TRANS, DIE	SPEED	BAR	ER D	RY	WET	VIS.	NO. 085.	SP OBSER	ECIAL VATIONS							
					COOE	(m) UIR.	FORC			37.6	BULB		DEPTHS									
					OT	SD 21	515	29	1 2	56	239	7	24									
	MESSENGE	CAST	CARO			T	T		SPECIFIC	VOLUA	AE ₹	△ 0 YN. M	501	ONL		PO ₄ =P	TOTAL-P	NO2-N	NO3-N	51 045	,	s
	HR 1/10	OF NO.	TYPE	DEPTH (m)	1 ℃	s °4.	SIG	MA-T	ANOMA	ALY-XIO	7 0	YN. M X 10 ³	, AETO	CITY	0 2 ml/i	yg + a1/1	μg = e1/l	1\10 - gu	μg - α1/1	µg = a1/	pH	c
	1710	-			 	1	+								-			i				+
	1	1 1	ST	D 0000	2610	3621	23	394	003	980	5 N	000	1 15	387	l	1 1		ı	' '		1	
	072	2	035		2610	36211		394	003	,		000		387								
		_	ST		2463	3604		26	003	6761	8 0	038	15	353								
			085	0010	2463	36039	24	26						353								
			ST		2365	3630		75	003	214	8 0	073		334								
	003	3	085		2365	36299		75	0.00	F 7 4		1.00		334								
			ST		2170	3645		42	002	576	b 0	102		288								
			08s ST		2170 2020	36450 3651		642 688	002	152	3 0	149		288 253								
			OBS		2020	36508		88	002		_ 0	7		253								
			ST		1920	3658		19	001	862	4 0	199		230								
			OBS		1920	36575		19						230								
			ST	0 0100	1870	3657	26	32	001	749	7 0	244	. 15	220								
			085		1870	36574		32						220								
			ST		1832	3656		40	001	680	6 0	287		213								
			085		1832	36555		40	001	4 = 1 /	0 0	220		213								
			ST OBS		1816 1816	3656 36555		544	001	651	0 0	329		213								
			ST		1779	3653		51	100	599	9 n	410		210								
			085		1779	36528		51	001		, ,	. 10		210								
			ST		1755	3649		54	001	586	4 0	490		211								
			OBS		1755	36492	26	54					15	211								
			ST	D 0300	1745	3649	26	57	001	580	6 0	569	15	216								
			OBS		1745	36491		57						216								
			ST		1585	3614		68	001	499	7 0	723		180								
			OBS		1585 1443	36142 3591		68	001	393.	2 0	2/0		180 149								
			ST OBS		1443	35905		81	001	292.	2 0	868		149								
			ST		1145	3542		704	00.1	176	7 0	996		059								
			OBS		1145	35422		704	001			,,,		059								
			ST		0905	3516		725	000	966	8 1	103		986								
			OBS		0905	35159		725						986								
			ST		0670	3502		750	000	718	6 1	188		911								
			OBS		0670	35022		750	000	E E -		25.		911								
			ST OBS		0540 0540	3502 35020		166 166	000	552.	<i>z</i> 1	251		875 875								
			ST		0493	35020		172	000	5054	4 1	304		873								
			085		0493	35015		772	000	- 0).		504		873								
			ST		0464	3502		775	000	475	5 1	353		877								
			OBS		0464	35019		775						877								
			ST	D 1200	0443	3502		778	000	456	3 1	400		886								
			085		0443	35022		778						886								
			ST		0427	3502		779	000	447	6 1	445		896								
			035		0427	35019 3502		779	000	444	2 1	4.00		896								
			ST OBS		0415	35015		780 780	000	444.	<i>5</i> 1	489		907								
			ST		0413	3503		782	000	440	7 1	534		924								
			OBS		0414	35031		782	000					924								
				2-0-	- 727	0.001	_ (-					~ 7	, - 1								

ICE					MARSDEN	STATION TH		ORIGINA	ATOR'S	OEPTH DEPT		WAVE	WEA-	CLOUD			NOOC	
10.	CODE	LATITU			SOUARE	(GMT)	YEAR		TATION	BOTTOM S'MPL	""	SERVATIONS	THER	TYPE AM			NOITAT MASER	
NO.			1/10	1/10 =		MO DAY HE		-		3 M FC	_		^-	TIPE AM				
017	€V	3918	N 0	5010 W			85 1967			5431 37	23	2 2	X1	8 8			0008	
					TAW		SPEED BAR		VIS.		ECIAL							
					COLOR	TRANS. OIR.	OR (mb		BULE CODE	DEPTHS OBSER	VATIONS							
						21	515 29	1 256	239 7	07		1						
						1	1					1						5
	MESSENGR	CAST NO.	CARO	DEPTH Imi	r °c	5 %.	SIG M A - T	ANOMALY-XI		VELOCITY	02 ml/	PO4=P yg = 01/1	TOTAL-P pg - at/I	NO2-N µg - al/l	NO3-N NO - 01/I	SI O4-Si /ID = gu	pН	Ĉ
	HR 1/10	I NO.	1172						x 10 ³			70		-	P# ===		-	+
	1		SID	0000	2611	3619	2392	003998	6 0000									
	08	5	OBS	0000	2611	36190	2392			15387								
			STD		2576	3617	2401	003912										
			STD		2541	3615	2410	003828										
			STD		2506	3613 3608	2420 2437	003744										
			STO		2438 2354	3603	2458	003399										
			STD		2272	3598	2478	003218										
			STD		2192	3593	2497	003047										
			STD		2113	3589	2515	002875										
			STD	-	1962	3579	2548	002579		15253								
			STD		1817	3571	2579	002299	4 0770	15219								
			STD		1680	3562	2606	002060	5 0879	15186								
			STD		1427	3547	2651	001646										
			STD	0500	1203	3534	2687	001321										
			STD		1008	3523	2714	001069										
			STD		0842	3514	2734	000877										
			STD		0704	3507	2749	000733										
			STD		0595	3501	2759	000634										
			STD		0515	3498	2766	000560	2 103	14880								
	9.8	5	OBS	T1012	0507 0484	34974 3498	2767 2770	000530	4 1693									
			STO		0461	3498	2773	000510										
	0.8	5	OBS	T1286	0444	34983	2775	000210	1.7.	14900								
	0.8	2	STE		0442	3498	2775	000495	9 1796									
			STO		0429	3498	2776	000488										
			STE		0417	3497	2777	000489	3 189	14924								
	C 8	5	OBS	1730	0394	34966	2779			14953								
			STE		0393	3497	2779	000482										
			STO		0375	3497	2781	000478	6 213									
	0.8	5	OBS	T2158	0365	34966	2782			15014								
			STE	2500	0344	3496	2784	000475	0 237									
	0.8	5	OBS	T 2665	0333	34962	2785			15087								
			STE		0309	3495	2786	000465	8 260									
	0.8	5	OBS	3689	0254	34901	2787			15231								

REFERENCE CIRY ID.	PIHE	LATITU	DE L	ONGITUDE	DRUFT	MARSDEN SOUARE	STATION GMT	IME	YEAR	CRUISE	RIGINA	TOR'S		DEPTH	MAX. DEPTH		WAVE ERVATIONS	WEA- THER	CLOUD		S1	NODC	
CODE NO.	CODE	•	1/10	1/10	-	10" 1"	MO DAY		-	NO.	NI	UMBER	-	BOTTOM	S'MPL'		HGT PER SE		1171 A.M.			UMBER	
31 8017	EV	3943	N 0	4955 W	:	113 99 WA		127	1967	1 4	100			5376 NO.	15		1 2	X1	013	l	-	0009	
						COLOR	TRANS. OIR.	SPEE OR FORG	MET	ER D	RY JLB	WET BULB	CODE	200	OBSERV	CIAL /ATIONS							
						DT	SO 22	51		8 2	72	250	7	36									_
	MESSENGR TIME	CAST NO.	CARD TYPE	DEPTH (m)	t °c	s */	SIC	SMA-T	SPECIFIC	VOLU N	DY	△ D N. M 10 ³	. SOU	CITY	O2 mi/i	PO4-P µg = a1/I	101AL-P	NO2-N vg - at/1	NO3-N yg - at/i	\$1 O4\$1 ug - 01/1	рН	S
	HR 1/10			-				+				1	10-										+
			STO			2485	3549 35488		378 3 7 8	004	1331	0 (000		350 350								
	127	,	08s S10		0	2485	3525	2	441	003	5293	3 00	38	15	280								
			085 STD	001		2205 1973	35250 3592		441 555	002	4484	+ 0(068		280 228								
	004	4	OBS	002	0	1973 1805	35920 3575		555 585	002	1672	2 01	91		228 180								
			STD OBS	003		1805	35750		585	002	1012	. 01	J 7 L		180								
			08s	004		1664 1645	35760 3580		620 627	0.01	7740) (131		140 137								
			OBS	005	0	1645	35795	2	627	001	, , ,,	, ,		15	137								
			08S	005 006		1673 1635	35901 35900		629 638						148 137								
			obs	007	0	1695	36080	2	637					15	158								
			STE	007		1664 1664	3618 36181		652 652	001	5439	9 0	172		151 151								
			OBS	800	0	1678	36230	2	653					15	157								
			08s 08s	008 009		1643 1670	36130 36270		653 658						146 157								
			STO OBS	010		1655 1655	3625 36248		660 660	001	483	1 0	210		153 153								
			\$10	012	5	1560	3604	2	666	001	4318	3 0	446	15	126								
			0BS 0BS	012		1560 1515	36041 35950		666 669						126 112								
			085	014	0	1528	36000	2	670	001	204		200	15	118								
			STC OBS	015		1509 1509	3595 35950		670 670	001	3962	2 0	282		113 113								
			STO			1323	3561 35610		684 684	001	277	7 0	349		057 057								
			08S	020		1323 1224	3545		691	001	217	2 0	411		030								
			08s 08s	025 027		1224 1246	35450 35554		691 695						030								
			STE	030	0	1199	3552	2	701	001	1326	5 0	470	15	030								
			08S ST[030		1199 0962	35519 3523		701 721	000	950	7 0	574		030 959								
			OBS	040	0	0962	35227	2	721					14	959								
			08S ST0	047		0836 0720	35130 3500		734 741	000	7602	2 0	559		922 880								
			OBS	050		0720	35000		741	000	() 7 /		720		880								
			STE OBS	060		0620 0620	3501 35010		756 756	000	6278	5 U	729		858 858								
			085	067		0555 0536	35009 3501		764 766	000	5310	2 0	787		843 840								
			STI OBS	070	0	0536	35008	2	766				101		840								
			STO OBS	080		0504 0504	3501 35014		770 770	000	497	3 0	838		844								
			STE	090	0	0475	3502	2	774	000	464	2 0	886	14	849								
			08s 5 T [090 100	_	0475 0455	35024 3502	_	774 776	000	452	5 0	932		849 857								
			085	100	0	0455	35020	2	776					14	857								
			STI OBS) 110 110		0439 0439			778 778	000	443	2 0	977		867 867								
			ST	120	0	0427	3501	2	779	000	442	9 1	021	. 14	879								
			0B\$	120 130		0427 0417			779 780	000	440	4 1	065		879 891								
			OBS	130	0	0417 0406		. 2	780 781		436		109		891 904								
			STI OBS	140	0	0406	35010) 2	781					14	904								
			STI OBS	150 150		0403			781 781	000	441	4 1	153		919 919								
			003	100	9	0403	33010	, 4	101					1.4	7 . 7								

		SHIP		100	LOVEITUOL	# MARSOEN	TATE	ION TIA		VE A B					DEPTH	DEPTH	OR.		WEA			.!	NODC	
318017 EV 4011 N 0.4955 w 14-5 0.9 0.7 26 16-7 19-67 11-9 10-30 40-91 12 22 2 2 X1 0.3 0.0 0.0	CODE NO.					10° 1°				TEAR	CRUISE NO.	ST.	ATION JMBER	- 1		OF.	1					N 2	UMBER	
	318017	7 EV	4011							967	IIP	100	130		4901	15	23	2 2	X 1	0 3			0010	
Note	,,-	.,	,		'	-		w		BARC) ·			VIS.	NO.	SPE	CIAL]	•					
						COL	OR TRANS.	DIR	OR FORCE				WET BULR		DEPTHS	OBSERV	ZNOITA							
STD 0000 2495 3577 2395 0039626 0000 15356 1						D	T 50	23		27	8 25	0	239	8	29			1						
STD 0000 2495 3577 2395 0039626 0000 15356 1		MESSENC	7740 16	CARD			<u> </u>		T		SPECIFIC V	OLUM	€ ₹	Δρ	501	JND T	- 1	. PO4-P	TOTAL	P NO2~N	NO1-N	SI O4-Si	l	S
SID		TIME	of NO.	TYPE	OEPTH (m	1 1 6	2	*/	SIGM	A-T	ANOMAL	Y-X107	, X	10 ³	VET.	CITY	O 2 ml/	yg = 01/1	μg = α1/			yg - a1/l	pH	c
167		1,																						T
STO 0010 2095 3581 2514 00.68348 0034 15258 15288 0010 2095 35810 2514 00.68348 0034 15258 15288 0020 1765 3577 2597 0020556 058 15167		'	•								0039	626	00	000										
CBS		16	57								00.28	348	3 00	134										
STD 002 1765 35777 2597 0020556 0058 15167 15167 15167 15167 15167 15167 15167 15167 15168 1											0020	240	, 00	,,,,										
STD 0030 1744 3589 2611 0019230 0078 15164 0080 0030 1744 35890 2611 0019230 0078 15164 0085 0030 1744 35890 2611 0019230 0078 15164 0085 0050 1622 35845 2636 0016865 0114 15130 0085 0050 1622 35845 2636 0016865 0114 15130 0085 0050 1578 3590 2651 0015011 0154 015101 0154 0157 0157 0157 0157 0157 0157 0155 0157 0							5 35	77	259	7	0020	556	00	58	15	167								
085 030		0.0	2																					
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085 0062 1578 35900 2651 1510 085 0070 1604 35980 2651 510 0075 1576 3597 2657 015012 085 0075 1576 3597 2657 15122 510 0100 1487 3588 2670 151097 085 0100 1487 3588 2670 15097 085 0100 1487 3588 2670 15097 510 0125 1427 3577 2674 0013471 0225 15081 085 0150 1150 1364 3567 2680 013471 0225 15081 085 0150 1150 1364 35670 2680 085 0150 1217 3560 2680 085 0200 1278 35520 2686 085 0250 1217 3560 2693 081 0250 1217 3560 2693 081 0300 1165 3542 2700 081 0300 1165 3542 2700 081 0300 166 35415 2700 510 0500 0670 3499 2747 085 0500 0670 3499 2747 086 0500 0570 3496 2758 087 070 0525 3500 2767 085 0700 0525 3500 2767 085 0977 04589 3502 2777 086 098 000 0470 3501 2777 087 000458 0488 14883 088 1000 0468 3503 5 2778 089 000 0470 3501 2777 089 097 0478 3501 2779 089 097 14887 089 097 0478 3501 2779 089 097 14887 089 097 0478 3501 2779 089 097 14887 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089 097 14889 089					D 0050	162	2 35	85	263	36	0016	865	0	14	15	130								
Section Sect																								
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STD 0150 1364 35670 2680 0013012 0258 15063 15063 STD 0200 1278 3552 2686 0012558 0322 15041 15041 STD 0250 1217 3546 2693 15027 150					-						0013	47]	1 0	420										
STD 0200 1278 3552 2686 0012558 0322 15041											0013	012	2 0	258										
OBS																								
STD 0250 1217 3546 2693 0011967 0383 15027 15027 STD 0300 1165 3542 2700 0011456 0441 15017 15017 STD 0400 0895 3513 2725 0009126 0544 14932 085 0400 0895 3513 2725 0009126 0544 14932 085 0400 0895 3513 2725 0706967 065 14861 085 0500 0670 34990 2747 14861 085 0500 0670 34990 2747 14861 085 0500 0670 34990 2747 14861 085 0500 0570 3496 2758 0005965 0689 14837 085 0600 0570 3496 2758 0005965 0689 14837 085 0600 0570 34962 2758 0005965 0689 14837 085 0600 0525 35000 2767 0005227 0745 14836 085 0700 0525 35000 2767 0005227 0745 14836 085 0700 0525 35000 2767 0004765 0795 14838 085 0800 0490 35012 2775 0004765 0795 14838 085 0800 0470 35012 2775 0004616 0842 14847 085 0977 04589 35028 27778 085 0977 04589 35028 27778 085 0975 0468 35035 2776 0004581 088 14863 085 1000 0468 35035 2776 0004581 088 14863 085 1000 0468 35035 2776 0004392 0979 14869 085 1100 0444 35010 2777 0004362 0934 14869 085 1100 0444 35010 2777 0004392 0979 14869 085 1200 0423 35010 2779 0004392 0979 14869 085 1200 0423 35010 2779 0004392 0979 14877 085 1200 0423 35010 2779 0004392 0979 14869 085 1200 0423 35010 2778 0004383 1023 14889 085 1200 0423 35010 2780 0004383 1023 14889 085 1400 0402 35000 2781 0004393 1110 14917 04902 03500 2781 0004393 1110 14917 04902 03500 035											0012	558	8 0	322										
OBS											0011	96	7 0	383										
STD																								
STD 0400 0895 3513 2725 0009126 0544 14932				ST	D 0300						0011	456	6 0	441										
STD 0500 0670 3499 2747 0006967 0625 14861 085 0500 0670 34990 27447 0006967 0625 14861 085 0500 0670 34996 2758 0005965 0689 14837 085 0600 0570 34962 2758 0005965 0689 14837 085 0600 0570 34962 2758 0005965 0689 14837 085 0700 0525 3500 2767 000527 0745 14836 085 0700 0525 3500 2767 000527 0745 0795 14838 085 0800 0490 35012 2772 0004765 0795 14838 085 0800 0490 35012 2775 0004616 0842 14847 085 0900 0470 35012 2775 0004616 0842 14847 085 0977 04589 35028 27779 085 0977 04589 35028 27779 085 0985 0472P 3507P 2778P STD 1000 0468 35035 2776 0004581 0888 14863 085 1000 0468 35035 2776 0004562 0934 14869 085 1100 0444 35010 2777 0004562 0934 14869 085 1200 0423 35010 2777 0004392 0979 14877 14877 085 1200 0423 35010 2777 0004383 1023 14889 085 1300 0412 35005 2780 0004383 1023 14889 085 1300 0412 35005 2780 0004376 1066 14902 085 1400 0402 35001 2781 0004393 1110 14917 085 1400 0402 35001 2781 0004393 1110 14917 085 1400 0402 35001 2781 0004393 1110 14917 085 1400 0402 35001 2781 0004393 1110 14917 085 1400 0402 35001 2781 0004393 1110 14917 085 1400 0402 35001 2781 0004393 1110 14917 04917											0000	17/		51.1										
STD 0500 0670 3499 2747 0006967 0625 14861 085 0500 0670 34990 2747 STD 0600 0570 3496 2758 0005965 0689 14837 085 0600 0570 34962 2758 14837 STD 0700 0525 35000 2767 STD 0800 0490 3502 2772 0004765 0795 14838 085 0800 0490 35018 2772 STD 0900 0470 35012 2775 0004616 0842 14847 085 0900 0470 35012 2777 0004581 04847 085 0957 0458P 3507P 2778P STD 1000 0468 3504 2776 STD 100 0464 35010 2777 STD 1200 0423 3501 2777 O85 1200 0423 3501 2777 STD 1200 0423 3501 2779 O85 1300 0412 3501 2779 O85 1300 0412 3501 2779 O85 1300 0412 3501 2779 STD 1400 0402 35001 2780 STD 1400 0402 35001 2780 STD 1400 0402 35001 2781 0004393 1110 14917											0009	120	5 0	344										
085											0006	96	7 0	625		-								
085 0600 0570 34962 2758 14837 STD 0700 0525 35000 2767 0005227 0745 14836 085 0700 0525 35000 2767 14836 STO 0800 0490 3502 2772 0004765 0795 14838 085 0800 0490 35018 2772 14838 STO 0900 0470 35012 2775 0004616 0842 14847 085 0900 0470 35019 2775 085 0977 0458P 35028 2777P 085 0985 0472P 3507P 2778P STD 1000 0468 3504 2776 0004581 0888 14863 085 1000 0468 3504 2776 0004581 0888 14863 STO 1100 0444 35010 2777 0004562 0934 14869 085 1100 0444 35010 2777 0004562 0934 14869 STD 1200 0423 35010 2779 STD 1300 0412 3500 2777 STD 1300 0412 3500 2789 STD 1300 0412 3500 2780 STD 1400 0402 35000 2781 0004376 1066 14902 O85 1400 0402 3500 2781 0004393 1110 14917							0 34																	
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08S 0700 0525 35000 2767 14836 ST0 0800 0490 35018 2772 14838 08S 0800 0490 35018 2772 14847 08S 0900 0470 3502 2775 0004616 0842 14847 08S 0977 0458P 35028 2777P 08S 0977 0458P 3502P 2778P STD 1000 0468 3504 2776 0004581 0888 14863 08S 1000 0468 35035 2776 STD 1100 0444 3501 2777 0004562 0934 14869 08S 1100 0444 3501 2777 STD 1200 0423 3501 2777 STD 1200 0423 3501 2777 STD 1300 0412 3500 2778 STD 1300 0412 3501 2779 0004392 0979 14877 STD 1300 0412 3501 2780 0004383 1023 14889 08S 1300 0412 35005 2780 14889 STD 1400 0402 35001 2781 0004376 1066 14902 08S 1400 0402 35001 2781 0004393 1110 14917											0005		7 0	71.6										
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STD											0004	765	5 0	799	14	838								
085 0900 0470 35019 2775 14847 085 0977 0458P 35028 2777P 085 0985 0472P 3507P 2778P STD 1000 0468 3504 2776 0004581 0888 14863 085 1000 0468 35035 2776 14869 STO 1100 0444 3501 2777 0004562 0934 14869 085 1100 0444 35010 2777 14869 STD 1200 0423 35010 2777 14877 O85 1200 0423 35010 2779 14877 STD 1300 0412 3500 2779 14877 STD 1300 0412 3500 2780 14889 STD 1400 0402 3500 2781 0004376 1066 14902 O85 1400 0402 3500 2781 0004393 1110 14917														0										
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085 1100 0444 35010 2777 14869 STD 1200 0423 3501 2779 0004392 0979 14877 085 1200 0423 35010 2779 14877 STD 1300 0412 3501 2780 0004383 1023 14889 085 1300 0412 35005 2780 14889 STD 1400 0402 35000 2781 0004376 1066 14902 085 1400 0402 35001 2781 14902 STD 1500 0397 3500 2781 0004393 1110 14917											0004	5.6	2 0	02/										
STD 1200 0423 3501 2779 0004392 0979 14877 085 1200 0423 35010 2779 14877 STD 1300 0412 35010 2780 0004383 1023 14889 085 1300 0412 35005 2780 14889 STD 1400 0402 35000 2781 0004376 1066 14902 085 1400 0402 35001 2781 0004376 1066 14902 STD 1500 0397 3500 2781 0004393 1110 14917											0002	20.	2 0	156										
STD 1300 0412 3501 2780 0004383 1023 14889 085 1300 0412 35005 2780 14889 STD 1400 0402 3500 2781 0004376 1066 14902 085 1400 0402 35001 2781 14902 STD 1500 0397 3500 2781 0004393 1110 14917											0004	39	2 0	979	14	877								
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STD 1500 0397 3500 2781 0004393 1110 14917											000		- *											
085 1500 0397 35002 2781 14917				51	150	0 039	7 35	00	27	81	0004	+39	3 1	110										
				085	5 150	0 039	7 35	002	27	81					14	917								

ENCE	SHIP	LATITU	IDE II	ONGITUDE E	MAR:	DEN	STATION TO	VE YEAR	_	DRIGINA			DEPTH	MAX. DEPTH	Des	WAVE ERVATIONS		WEA-	CLOUD			NDDC
ID.	CDDE	CATHL	1/10	NGITUDE E	10°		MD DAY HI		CRUISI ND.		UMBER	8	0110	OF S'MPL'S	DIR.	HGT PER S		HER	TYPE AMI		S N	TATION UMBER
8017	EV	4011		4955 W	149			78 196	7 116	1		4	901	41	23	2 2		x 1	8 2			001
		.01		.,,,		WAT		IND I		AIR TEN			ND.			15 15 1		Λ ±	012	ı		0011
						COLDR	TRANS. DIR.	SPEED ME	TER	DRY	WET	VIS.	200	SPEC VR328C								
						CODE	lm)	FORCE (M	_	BULB	BULB	-	\rightarrow									
					,		23	512 2	78 8	250	239	8	07			_	,					
	MESSENGR TIME		CARD	DEPTH (m)	7	*c	s */	SIGMA-T		C VOLUA		D.M.	SDUN		O2 m1/l	PD4-P	TOTA		NO2-N	NO ₃ -N	SI D4-Si	pН
	HR 1/10		TYPE						ANUN	AALY-X10	X	103	VELOC	CITY		μg = 01/1	νg -	01/1	1/10 - gu	yg − at/l	yg - a1/1	p
														1					İ			
			STD	0000		497	3573	2392	003	39929	9 00	00	153									
	17	8	OBS	0000		497	35731	2392		0015			153									
			STO	0010		466	3572	2401		3915		40	153									
			STO	0020		435	3571 3570	2409 2418		38379		78	153									
			STD	0050		404 344	3569	2418		37604 36061		16 90	153 153									
			STO	0075		269	3566	2454		3431			153									
			STD	0100		196	3564	2473		3257		62	152									
			STO	0125		125	3562	2492		30930			152									
			STO	0150	2	055	3560	2509	002	2934	7 05	16	152	68								
			STD	0200	1	919	3556	2542	00	2638	7 06	56	152	38								
			STO	0250	1	789	3552	2572		2370:		81	152									
			STD	0300		664	3548	2599		2125			151									
			STO	0400		433	3540	2644		1710		85	151									
			STD	0500		224	3534	2682		1361		39	150									
			STD	0600		038	3527	2712		10929			150									
			STD STD	0700 0800	_	876 736	3522 3516	2735 2751)8744)7153			149									
			STD	0900		619	3512	2764		05879			149									
			STO	1000		525	3508	2773		0500	_		148									
			STD	1100		454	3504	2778)447(148									
	171	8	085	T1162		422						-										
			STD	1200	0	417	3501	2780	000)4315	5 17	50	148	75								
			STO	1300		406	3499	2779	000)441(5 17	94	148	86								
			STD	1400		397	3497	2779	000)4538	8 18	38	148									
	178	8	085	T1466		391	34961	2779	0.0				149									
			STD	1500 1750		390 378	3496 3497	2779		14594			149									
	178	Ω	085	T1974		365	3497	2780 2782	000)4621	7 19	99	149									
	7.16	U	STD	2000		363	34909	2782	000	04604	4 21	15	149									
	178	Я	085	T2495		328	34954	2784	000	,4004	+ 21	10	150									
	7,0	0	STO	2500		328	3495	2784	000)461(23	45	150									
			STO	3000		288	3494	2787)4409			151									
	178	8	085	T3085		282	34935	2787	000	, , , , ,			151									
			STD	4000		231	3491	2790	000	1423:	3 30	03	152									
	178	-	OBS	4055		229	34907	2790					_									

REFERENCE	SHIP	LATITU	OF	LONGITU	DE JORIET	MARSOEN	STATION THE	ΑE	YEAR		RIGINA		\Box	DEPTH	Derin	089	WAVE		WEA-	CLOUD		17	ODC	
CODE NO.	COOE	•	1/10		1/10	10° 1°	MO DAY HE	.1/10		CRUISE NO.	NU	ATION	ŧ	BOTTO	S'MPL'S	Į.	HGT PER		CODE	TYPE A MT		N	JMBER	
31801	7 EV	4044	N	05000) W			_	1967		100			3713	15	24	0 2		X1	0 3			0012	
						COLOR		SPEED	RARC)°	R TEMI	WET	VIS.	NO. OBS.	SPEC	IAL								
						COOE	IMI DIR	OR FORCE			LB	BULB		DEPTHS	OBSERVA	4110143								
		Ţ-				DT	50 24	510	27	1 25	6	239	7	40	<u> </u>									
	MESSENGR	CAST NO.	CAR		PTH (m)	T °C	s */	SIG/	MA-T	SPECIFIC	VOLUM	€ S	Δ D.		OCITY	O ₂ m1/I	PO4-P	TOT	A L-7	NO2-N ug - ot/l	NO ₃ -N	\$1 O4~\$1 up = at/1	pН	Š
	HR 1/10	-		-		+	 					X	103	+				1 20		pg - 01/1	/Io - gu	pg - 0// 1		-
	1	1	 51	TD (0000	2477	3568	23	95 195	0039	717	1 00	000	1 15	5350		ĺ	ı	- 1					1.1
	203	3	OB:	S (0000	2477	35680	23	95					15	350									
			0B3		0010	2117 2117	3562 35620	24	94	0030	294	0.0	35		5262 5262									
			\$1	TD (020	1665	3562	26		0019	349	00	060	15	136									
	003	3	0B3		0020	1665 1643	35622 35700	26 26	09						5136 5131									
			0B3		0025	1714	35991	26							5156									
			51		0030	1695	3599		30	001	7373	0 (78		151									
			083 083	-	0030	1695 1640	35991 35950		30						5151 5135									
			S.	TD (0050	1645	3611	26	51	0015	440	0	111	15	5141									
			083		0050	1645 1562	36111 3600		62	0014	503	0	148		5141 5118									
			OB:		0075	1562	36000		62	001-	,,,,,	0	- 40		5118									
			OB:		0087	1517	35920 3605		66	0013	1434	0	106		5105									
			089		0100	1535 1535	36050		72	0013	0000	U	184		5114 5114									
			S	TD (125	1443	3579		72	0013	669	0.	218		086									
			083		0125	1443 1372	35790 3571		72	0012	865	0.	251		086									
			OBS		0150	1372	35712	26		001.	. 000		-) 1		066									
			0B		0180	1269 1304	35540 35660		89						035									
			083 S1		0190	1280	3558	26 26	90	0012	2157	0.	313		5049 5042									
			083	S (0200	1280	35580		90						042									
			OB:		0205	1245 1265	35500 35620	26 26	91						5030 5039									
			S.	TD (0250	1141	3541	27	04	0010	931	0	371	15	5000									
			089		0250	1141 1034	35410 3531		104	0009	2806	. 0	423		5000 4969									
			OB:		300	1034	35310		15	000	, , , ,		. 2 5		+969									
					0400	0809	3509		35	0008	3082	0	513		4900									
			0B:		0400	0809 0780	35090 35100		35						4900 4890									
			0 B	S	0420	0823	35190		41					14	4909									
			OB:		0500 0500	0711 0711	3514 35140		53	0000	1439	0:	86		+879 +879									
			S.	TD (0600	0630	3516	27	66	000	321	0	545	14	864									
			0B3		0600	0630 0641	35158 3506P		'66 '57P					14	+864									
			OB:	S (0625	0594	35120	27	68						+853									
			OB:		0635	0607 0569	35123 35110		66						4860 4853									
			0B:		0700	0576	3512		70	0004	980	0	596		4858									
			0B:	S (0700	0576	35124	27	70					14	4858									
			08:		0800	0520 0520	3508 35075		773	000	+ / 30	0	745		4851 4851									
			OB:	S	0806	0536	35120	27	75					14	4859									
			OB:		0865	0496 0490	35071 3506		776 776	0004	4554	. 0	791		4852 4856									
			08:	S	0900	0490	35062		76					14	4856									
					1000	0468 0468	3505 35051		777	0004	+463	0	636		4863 4863									
			0B:		1100	0445	35031		78	0004	4442	0	881		4870									
			QB:	S	1100	0445	35028	27	778					14	4870									
			S 0B:		1200 1200	0435 0435	3502 35023		779 779	000	+452	. 0	925		4882 4882									
			S	TD	1300	0421	3503	27	781	000	+309	0	969	1	4893									
			OB:		1300 1400	0421 0424	35031 3504		781 781	000	1370))	012		4893 4912									
			0 B	S	1400	0424	35040		81					14	4912									
					1500	0406	3501		781	000	4461	. 1	057		4920									
			0В:	5	1500	0406	35009	21	781					1.4	4920									

REFERENCE	SHIP		T		F 5	MARSDEN SQUARE	STATION TO	ME	W		ATDR'S		DEPIH I	MAX.	010	WAVE SERVATIONS	WEA-	CLDUD			NODC	
CTRY ID.	CDDE	ATITUDE 1/10		1/10 °	DRIFT		MD DAY H	g 1/1n	YEAR	CRUISE !	TATIDN NUMBER		BOTTOM 5	OF MPL'S		HGT PER SE	THER	TYPE AM			STATION NUMBER	
31801	7 FV 4	118 N	_	008 W					1967	11P 10	032	1	3749	15	25	0 2	X1	0 3			0013	
1 21001	1 54 1 4	110 14	100	000 W	1 1	WAT		IND	BARG	A ID TE	MP. °C		ND.			10121	1 71	1 013	1	-	0013	
						COLOR	TRANS. DIR.	SPEEO	44 5 7 5	R DRY	WET C	VIS.	DOF	SPECI BSERVA								
						CDDE	(m)	FORCE	lmbe) BULB	BULR	_										
						DT	SD 22	518	26	1 244		7	23							,		
	MESSENGE C	AST C	ARD	DEPTH	(m)	T *C	s °/	SIGA	AA-T	SPECIFIC VOLU	ME DYN	D M.	SOUN) 2 ml/l	PO 4-P	101AL-P	NO ₂ -N	NO3-N	SI D4-5	ј рн	S
	HR 1/10	10.	YPE							ANOMALI-LI	х 1	03	VELDCI	ITY		μg = e1/1	yg - a1/l	νg - 01/1	yg - a1/l	νg = α1/	1 -	C
				,				-														
			STD	000		2260	3576	24		003306	9 00	00	1529									
	027		85	000		2260	35758	24		001003	2 00	7 7	1529									
			STD BS	001		1845 1845	3611 36111	26 26		001993	3 00	21	1519 1519									
			STD	002		1756	3635	26		001616	8 00	45										
	003		85	002	0	1756	36345	26	43				151	72								
			STD	003		1738	3639	26		001549	4 00	60										
			85	003		1738	36385	26		001504		0.1	1516									
			STD BS	005		1737 1737	3645 36451	26 26		001506	0 00	ΑŢ	151									
			STD	007		1727	36431	26		001506	6 01	29										
			85	007		1727	36430	26					151									
			STD	010	0	1683	3634	26	60	001479	6 01	66	1516	63								
			85	010		1683	36340	26				• -	1510									
			STD BS	012		1550 1550	3604 36035	26 26		001414	5 02	02	1512									
			STD	015		1397	3574	26		001317	2 02	36										
			BS	015		1397	35739	26		00131	_ 0_	,,	150									
			STD	020		1253	3551	26		001218	8 03	00										
			BS	020		1253	35505	26					150									
			STD	025		1172	3542	26		001142												
			STD BS	030		1073 1073	3533 35325	27 27		001046	3 04	13	1498									
			STD	040		0825	3508	27		000839	9 05	nя	1490									
			Bs	040		0825	35080	27		000027	, ,		1490									
			STD	050		0606	3495	27		000639	2 05	82	148	35								
			85	050		0606	34950	27					148									
			STD	060		0593	3509	27		000532	2 06	40	1484									
			BS STD	060 070		0593 0557	35090 3510	27 27		000489	0 06	91	1484									
			BS	070		0557	35102	27		000 +0 9	0 00	- 1	1485									
			STD	080		0475	3504	27		000445	0 07	38	148									
			ВЅ	080		0475	35035	27					1483	32								
			STD	090		0456	3503	27		000435	8 07	82	_									
			85	090		0456	35030	27		000/33	3 00	2.5	1484									
			STD 8s	100		0436 0436	3502 35015	27 27		000432	2 08	25	1484									
			STD	110		0430	3503	27		000423	5 08	68										
			85	110		0427	35025	27					1486									
			STD	120		0414	3502	27		000420	4 09	10	148									
			85	120		0414	35020	27					148									
			STD	130		0413	3502	27		000427	1 09	53	148									
			8S STD	130 140		0413 0406	35022 3503	27 27		000423	0 09	0 5	1489									
			BS	140		0406	35028	27		000423	0 09	73	1490									
			STD	150		0397	3503	27		000422	5 10	38										
		0	85	150	0	0397	35025	27					149									

REFERENCE SHIP		- E	MARSDEN	STATION TIL		ORIGINATO		DEPTH DEPTH		WAVE ERVATIONS	WEA-	CLOUD			ODC	
CTRY ID. CODE LATITE	1/10	NGITUDE HE		NO DAY H	YEAR	CRUISE STAT		BOITOM S'MPL'S	1	HGT FER SE	THER	TYPE AM	_		UMBER	
						-				1	+		-	-		
31 8017 EV 4111	8 N 05	008 W	150 10 WAT		142 1967	IIP 1003		3749 36	25	0 2	X1	7 1	-		0014	
			COLOR		SPEED MET	0	VIS,		CIAL							
			CODE	IMANS. DIR.	FORCE (mb		ULB CODE	DEPTHS OBSERV	A HON S							
				22	518 26	1 242 2	39 7	07								
MESSENGR CAST	CARD					SPECIFIC VOLUME	₹∆D	SOUND		PO4-P				6.0.6		3
IEME OF NO.	TYPE	DEPTH (m)	T *C	s */	SIG M A-T	ANOMALY-X107	DYN. M.	VELOCITY	02 ml/l	μg - 01/I	101A L-P ug - et/l	NO2⊷N µg = ol/l	NO3-N µg - at/l	1/10 - Qu	pН	Č
HR 1/10	 				-		1 70	+		-			-			+
	STD	0000	2395	3531	2391	0040057	0000	15327				l		I		
042	OBS	,0000	2395	35308	2391	0040057	0000	15327								
0.42	STD	0010	2367	3530	2399	0039366	0040									
	STD	0020	2339	3530	2407	0038624	0079									
	STD	0030	2311	3529	2414	0037959	0117	15311								
	STD	0050	2256	3528	2429	0036602	0192	15300								
	STD	0075	2189	3527	2447	0034964	0281	15287								
	STO	0100	2122	3526	2465	0033358	0366									
	STD	0125	2057	3525	2482	0031837	0448	15260								
	STD STD	0150	1993 1869	3524 3522	2498 2529	0030370	0526 0671	15247								
	510	0250	1750	3520	2557	0027623	0802	15220 15194								
	STD	0300	1636	3518	2582	0022799	0922	15167								
	STD	0400	1423	3514	2626	0018782	1130	15116								
	STO	0500	1229	3511	2664	0015387	1301	15068								
	STO	0600	1056	3508	2694	0012637	1441	15024								
	STD	0700	0902	3505	2717	0010416	1556	14983								
	STD	0800	0768	3503	2737	0008598	1651	14949								
	STD	0900	0654	3501	2751	0007190	1730	14921								
	STD	1000	0560	3500	2762	0006067	1797	14900								
	STD	1100 1200	0486 0431	3498 3498	2770 2776	0005331	1854 1904									
042	085	T1229	0431	34974	2777	0004710	1704	14880								
542	STD	1300	0413	3497	2777	0004624	1951									
	STD	1400	0406	3498	2778	0004618	1997	14903								
	STD	1500	0397	3498	2779	0004591	2043	14916								
042	OBS	T1539	0394	34975	2779			14921								
	STD	1750	0373	3498	2782	0004472	2156									
	ST0	2000	0351	3498	2784	0004359	2267									
042	OBS	T 2054	0347	34980	2785		2/ 27	14989								
0.4.3	STD	2500	0318	3495	2785	0004465	2487									
042	08S STD	T2568 3000	0313	34946 3493	2785 2787	0004331	2707	15062 15122								
042	OBS	T3080	0274	34932	2788	0004331	2101	15134								
042	085	3585	0230	34991	2796			15204								
042	000	2202	0230	3 + 7 7 1	2,70			23204								

REFERENCE	SHIP				MARSOEH	STATION	TIME		ORIGIN	ATOR'S		DEPTH	MAX. DEPTH	Τ	WAVE	WEA-	CLOUG		T	NODC	7
CODE NO.	COOE	LATITU	1/10 L	SHGITUDE 1/1/10	SOU ARE	MO DAY	1	re a r	NO.	TATION NUMBER		TO BOTTOM	OF S'MPL'	00	HGT PER SE	THER	TYPE AM	,		STATION	
31801	7 FV	4145		5013 W	150 10		-	967	11P 10	033		3823	15	22	2 2	x1	0 3			0015	1
1 31,001	1 -4 1	7270	,,,,,	2012 #1			WIND	RARO	A ID TE			NO.			12121	\ \ 1	1 015	F	- 1	0015	71
					COL	OR TRANS. OIR.	SPEED OR FORCE	M ETEI	R ORY	TIMET	VIS.		OBSERV	CIAL ATIONS							
					_			-			-										
] D1	r SD 23	S17	23	-	228	7	27								1	1.1
	MESSENGR TIME	L CAST	CARO	DEPTH (m:	1 1°C	s °4.	SIGMA	4-T	SPECIFIC VOLU	ME OY	△ D N. M. 10 ³	VELO		02 ml/	PO2-P VB = 81/1	TOTAL-P	NO2-N ug - at/1	NO ₃ -N µg - al/l	SI O ₄ —S /اه - ولا		ç
	HR 1/10										10-	+			1.0			74	-	-	-
	Į	Į.	STD	0000	2152	3317	229	. B	004890	n n	000	152	241						l	l	11
	082	2	085	0000	2152				004070		000		241								
			085	0005	1356								013								
	0.01		STD	0010	1345		253		002641	4 00	38	15(
	002	_	0BS STD	0010	1345 1285		253 253		002630	3 00	064	149	010								
			OBS	0020	1285				002000	5 00	- 0 -		989								
			STD	0030	1041	3475	267	1	001351	6 00	84	149	920								
			OBS	0030	1041				001206	3 0	1.0	149									
			STD OBS	0050	1087		268 268		001206	0.	10	149									
			STD	0075	1179		269		001168	4 0	139	149									
			OBS	0075	1179		269	1				149									
			STD	0100	1156		269		001176	4 0	168	149									
			OBS STD	0100 0125	1156 1143		269 269		001167	3 0	198	149									
			OBS	0125	1143				001107	, ,,	90	149									
			STD	0150	1145		269		001174	9 0	227	149									
			OBS	0150	1145							149									
			STD	0200	0926		271		001010	2 0	282	149									
			OBS STD	0250	0847		271 272		000843	8 0	328	149									
			OBS	0250	084				0000.3			148									
			STD	0300	0706		272		000841	9 0	370	148									
			085	0300	0706				000//1			148									
			STD OBS	0400	0646 0646		275 275		000641	9 04	+44	148									
			STD	0500	0555		276		000528	4 05	03	148									
			OBS	0500	0555							148									
			STD	0600	0523		276		000486	4 05	554	148									
			OBS OBS	0600 0630	0523 0563							148									
			OBS	0660	0551							148									
			STD	0700	0500	3506	277	4	000446	5 06	00	148	326								
			OBS	0700	0500				000634	0 04	. , ,	146									
			STD	0800 0800	0463 0463		277 277		000424	9 06	344	148									
			SID	0900	0448		277		000411	7 06	86	148									
			OBS	0900	0448							148	338								
			STD	1000	0430		278		000406	9 0	727	148									
			OBS STD	1000 1100	0430		278 278		000403	2 0	767	148									
			OBS	1100	0415				000-00			148									
			STD	1200	0405	3502	278	2	000406	0 08	808	148	370								
			085	1200	0405				000407	3 00	2 / 0	148									
			STD	1300 1300	0397 0397		278		000407	2 06	348	148									
			STD	1400	0392		278		000409	9 08	389	148									
			OBS	1400	0392		278	3				148	398								
			STD	1500	0385		278		000405	3 09	30	149									
			OBS	1500	0385	35027	278	4				149	12								

REFERENCE SHIP	FONGILIOOF 1906	MARSDEN SQUARE	STATION TIME	E YEAR		ATION	DEPTH TO BOTTOM	MAX. DEPTH OF	OBSER	AVE VATIONS	WEA- THER COOE	CLOUD CODES		STA	DOC TION MBER
CODE NO. 1/10	1/10		MO DAY HR.1		11P 100	JMBER 134	3438	3 741 5 3		GT PER SEA	x1	0 3		0	016
318017 EV 4210 N	05014 W	WAT	ER WIN	ID BARO	A IR TEM	P. °C VIS.	NO.	SPEC	CIAL	1 1	'				
		COLOR	TRANS. OIR.	OR (mbs		WET COD	OBS. OEPTHS	OBSERV	ZHOITA						
		OT		518 23	0 233	228 7	41	L,							
MESSENGR CAST TIME OF NO. TY	RD OEPTN (m)	1 °C	s */	SIGMA-T	SPECIFIC VOLUM	AE	SO VEL	OCITY	O2 ml/l	PO4-P µg = a1/1	TOTAL-P yg • qt/l	NO2~N ug - al/!	NO3-N yg = at/l	SI O4-\$1 pg - a1/1	pH CC
				0.7.4.7	004430	4 000	15	5226		1				1	1
111 OB	TO 0000	2080	3355 33549	2347	004429	+ 000		5226							
-	TD 0010	1478	3434	2553	002465	2 003		060							
08	SS 0010	1478 1125	34340 3440	2553 2628	001752	2 005		4944							
003 OB	35 0020	1125	34400	2628	001638	3 007		4944 4848							
S 08	STD 0030	0870 0870	3400 34000	2640 2640	001038	3 001	14	4848							
06	35 0035	0766	33850	2644				4807 4852							
O 8		0873 0820	34140 34200	2651 2664			1	4834							
S	STD 0050	0840	3437	2674 2674	001324	7 010		4844 4844							
OE OE		0840 0809	34368 34360	2678			1	4834							
\$	STD 0075	0914	3472 34717	2689 2689	001182	5 013		4881 4881							
OE 06		0914 0928	34835	2696			1	4889							
	STO 0100	0835	3474 34740	2704 2704	001050	6 016		4856 4856							
00		0835 08 7 5	34832	2705			1	4874							
5	STD 0125	0777	3476 34758	2714 2714	000957	6 018		4838 4838							
	8S 0125 BS 0140	0777 0735	34700	2715			1	4823							
:	STD 0150	0816 0816	3486 34860	2716 2716	000942	9 021		4858 4858							
	BS 0150 BS 0183	0745	34890	2729			1	4837							
	STD 0200	0580 0580	3461 34607	2729 2729	000819	9 045		4770 4770							
	BS 0200 BS 0212	0668	34960	2745			1	4812							
0	BS 0245	0606 0636	34844 3492	2744 2746	000665	57 029		4791							
	STD 0250 BS 0250	0636	34919	2746	00000		1	4805							
	BS 0270 STD 0300	0655 0582		2748 2747	00066	23 03:		.4817 .4791							
	STD 0300 BS 0300	0582	34840	2747				4791							
	BS 0325	0655		2755 2759				l 4827 l 4821							
	BS 0370	0576	34985	2759				4802							
0	STD 0400			2763 2763	00052	26 03		14800 14800							
	BS 0472	0477	34950	2768				14778							
	STD 0500			2770 2770	00046	65 04		l 4786 l 4786							
U	STD 0600	0460	3499	2773	00044	16 04		14792 14 <mark>7</mark> 92							
0	BS 0600 STO 0700			2773 2775	00043	71 05		14792							
	8S 0700	0454	34996	2775				14807 14806							
	085 0750 085 0760			2776 2778				14813							
	STD 0800	0435	3500	2777	00042	16 05		14815 14815							
C	OBS 0800			2 77 7 2 77 9	00040	51 06	07	14825	1						
(DBS 0900	0418	35008		00041	54 06		14825 14841							
(STD 1000							1484]							
	STD 110	0388	3498	2780	00040	87 06		14845							
(OBS 110			2781	00041	23 07	30	1486	l .						
(OBS 120	0 038		2781 2782	00041	37 07		1486							
	STO 130 OBS 130		3 34988	2782				1487	7						
	STD 140	0 038	2 3500	2783 2783	00041	.24 08		1489							
	OBS 140 STO 150	0 037	9 3500	2783		.72 08	554	1490	7						
	OBS 150	0 037	9 35000	2783				1490	,						

REFERENCE SNIP LATIT	une Io	NGITUDE SOUTH	MARSTEN	STATION TH	ME YEAR	ORIGINAT		TO DEPT		WAVE RVATIONS	WEA				NODC	
CODE NO. CODE	1/10	1/10 2		MO DAY H			TION MBER	BOTTOM S'MPL		HGT PERT SE	THER				NUMBER	
318017 EV 421	0 N 05	014 W			23 1967	11P 100	3.4	3438 33		2 2						
			WAT		INO BAR	A IR TEALR	°C	20		2 2	X1	0 2	1	1	0017	
			COLOR	TRANS. DIR.	SPEED MET	ER ORY \	VET CODE	0.00 37	VATIONS							
			CODE		EOECE (mp		ULB									
				21	518 23	30 233 2	228 7	07								
MESSENGR CAST	CARD	DEPTH (m)	ĭ ℃	5 %.	SIGMA-T	SPECIFIC VOLUME	₹ △ D	SOUND	O2 ml/l	PO ₄ =P	TOTAL-P		NO3-N	SI 04-		S
HR 1/10		-					x 10 ³	VELOCIII		yg • e1/1	VQ - 01/1	µg - a1/1	yg - ai/l	ا ه - و بر	/ /	C
								1								
123	STD OBS	0000	2083 2083	3350 33504	2342	0044697	0000	15226								
123	STD	0010	2058	33504	2350	0044007	0044	15226 15221								
	STD	0020	2033	3353	2357	0044007	0088	15216								
	STD	0030	2008	3354	2365	0042640	0131	15211								
	STD	0050	1959	3356	2379	0041317	0215	15201								
	STD	0075	1899	3359	2397	0039724	0316	15189								
	STD	0100	1840	3362	2414	0038175	0414									
	STD	0125	1782	3365	2431	0036674	0507									
	STD	0150	1726	3368	2446	0035243	0597	15152								
	STD	0200	1616 1511	3374 3380	2476 2504	0032500	0766	15127 15104								
	STD	0300	1410	3386	2531	0027556	1066	15080								
	STD	0400	1222	3398	2578	0023257	1320									
	STD	0500	1053	3410	2618	0019536	1534	14993								
	STD	0600	0902	3422	2652	0016317	1714	14956								
	STD	0700	0770	3434	2682	0013543	1863	14924								
	STO	0800	0655	3446	2707	0011126	1986	14897								
	STD	0900	0560	3458	2729	0009061	2087	14877								
	STD STD	1000	0482 0423	3470 3481	2748	0007267	2169	14864								
	STD	1200	0383	3493	2764 2777	0005738	2234	14858 14859								
123	OBS	T1203	0382	34937	2778	0004454	2205	14859								
	STD	1300	0379	3494	2778	0004433	2329	14874								
	STD	1400	0376	3495	2779	0004453	2374	14890								
	STD	1500	0373	3495	2780	0004463	2418	14906								
123	OBS	T1506	0373	34950	2780			14907								
	STD	1750	0362	3495	2781	0004514	2530	14943								
122	STD	2000	0348	3495	2782	0004513	2643	14980								
123 123	085 085	T2010 T2496	0347	34952	2782			14981								
123	STD	2500	0311	34950 3495	2786	000/3/	2015	15049								
	STD	3000	0272	3493	2786 2788	0004364	2865 3080	15049								
123	OBS	T3016	0271	34931	2788	0004223	3000	15119 15121								
123	OBS	3319	0242	34921	2790			15161								

REFERENCE	SHIP		T		L E M	ARSOE		STATION TI	ME		01	RIGINAT	DR*S		OEPTH	MAX.		WA	VE ATION:	.	WEA-	CLOUD			ноос	
CTRY IO.	CODE	LATITU	DE 1/10	LONGITUDE '1/10	5 7 L.	DUARE		(GMT)	0.1/10	YEAR	CRUISE NO.		TION	В	OT MOTTO	OF S'MPL"			PER :		COOE	TYPE AM			TATION	
	EV	4222		050140W		-	-		45	1967	+	100	3.5	12	889	26	1	2	2		X 1	7 3			0018	
31 8017	u ra l	4626	ין אוכ.	JJ0140W	1 1 1 -		WAT		MNO		A	R TEMP.		1	NO.			1 -	1-1	- 1	^ 1	, , , ,	1	- 1	0010	
						co	LOR	TRANS OIR.	SPEEO	METE			NET C	VIS.	OBS.		CIAL /ATIONS									
						C	300	tm) Oin.	FORC	(mbs	1 60	LB S	ULB		ZHTS											
								23	518	22	0 25	0	239	7	05			Ļ						,	,	
	MESSENG		CARD	OEPTN	(m)	T *C	;	s ·/	SIG	MA-T	SPECIFIC		1 010	. M.	sou		O2 ml/l		O4-P		TA L-P	NO ₂ -N	NO ₃ -N	SI 04-S	рН	S
	HR 1/10	Y NO.	TYPE								ANOMA	LT-KIU'	Х	103	VELO	CITY		"	g = a1/1	ν Q	* 61/1	1\10 - gu	µg - 01/1	µg - 01/		С
																					- 1					
	1		ST	000	0	210)5	3465		23	003	7000	0.0	00		245										
	14	4	OBS	000		210		34645		23		0.05				245										
			ST			208		3465		30	0036		00		152	241										
			511 511			203	-	3465 3465	_	43	003			08		230										
			ST			198		3466		56		+032		77	15											
			ST			192	26	3466		72	0032	2615	02	61	15	209										
			ST	0 10	0	186	59	3467	24	87		1264	03	41		197										
			ST			18		3468		01		9967	_	17		185										
			ST			179		3468		15		3686		90		173										
			ST			165		3470 3471		66	002	5318		28		149 126										
			ST			144		3472		89		2063	-	69		103										
			ST			126		3475		29		8450		72		059										
			ST	_		109	96	3477		63	001	5373	12	41	150	017										
			ST			094		3480		91		2790		82		980										
			ST			08		3483		14		0614		99		947										
			ST			069		3485		33		8831		96		919										
			ST			059		3488 3490		748 760		7362 6177		77		896 880										
			ST ST	_		04!		3493		770		5250		02		870										
			ST			040		3495		777		4544		51		868										
	14	4	OBS			039	95	34958	27	778					14	868										
			ST			038		3495		778		4434		96		877										
			ST			03		3494		79		4460		40		890										
			ST			036		3493		779	000	4494	15	85		903										
	14	4	OBS			03		34931 3494		779 780	000	4528	20	98		905 941										
			5 T 5 T			03		3495		783		4920 4459		10		978										
	14	4	085			03		34952		783	000	, ,				982										
								3494		786	000	4249	2/	2.0												
			ST	0 250) ()	021	70	フマフマ	6	00	000	4247	24	28	10	044										

CTRY ID.	SHIP	LATITU	IDE LO	NGITUDE 3 DUTIDNO	MARSDEN SOUARE	STATION TO	IME	YEAR C	DRIC	STATION		OEI	PTH	MAX. DEPTH	0858	WAVE ERVATIONS	WEA- THER	CLDUD			NODC	
CODE ND.	CDDE	•	1/10		10* 1*	MO DAY H	R.1/10		NO.	NUMBER		BOT		DF S'MPL'S		HGT PER SEA			_}		STATION NUMBER	
31 801	7 EV	4222	25N 0	50140W	150 20 WAT		155 VIND	T		0035	_ l	-	89	15	21	2 2	X1	0 3			0019	
					COLDR		SPEED	METER	DRY	WET	VIS.	DEP DEP	85.	SPEC	IAL							
					OOE	SD 23	S18	(mbs)	250		_	_	9									
	MESSENGR TIME	CAST	CARD				310	220			_	-									_	
	HR 1/10	ND.	TYPE	DEPTH (m)	T *C	s %.	SIGN	NA-T 2	PECIFIC VO	x107	YN. M x 10 ³	١.	VELOC		02 ml/l	PO4-P pg = 01/1	TOTA L-P 1/10 - 01/1	NO2-N ug - 01/l	ND ₃ -N νg - οt/l	\$1 D4=1		c
					74.4							1									1	\forall
	155	5	STD OBS	0000	2143 2143	3470 34695	24		00376	27 (0000		152 152									
			STD	0010	1959	3461	24!	59	00335	96 0	036	,	152	07								
			08S STD	0010	1959 1615	34610 3463	24!		00254	71 0	065		152									
	002	2	OBS	0020	1615	3500																
			STD OBS	0030	1368 1368	3500 34998	262		00176	71 0	087		150									
			08s 08s	0034	1367 1286	35240 35228	264						150	40								
			STO	0050	1330	3549	266		00134	13 0	118		150									
			08s 08s	0050 0069	1330 1295	35485 35530	267						150									
			STD	0075	1267	3551	268		00120	85 0	150		150									
			08S	0075 0085	1267 1284	35510 35538	268 268						150									
			STD	0100	1235	3539	268	34 (00124	28 0	180		150									
			085 STD	0100 0125	1235 1201	35390 3537	268		00120	08 0	211		1500									
			OBS	0125	1201	35370	268	39					1500									
			ST0 085	0150 0150	1183 1183	3540 35399	269		00115	28 0	240		1499									
			OBS	0159	1178	35368	269	94					149									
			OBS STD	0180 0200	1130	3515P 3524	268		00101	16 0	294		1495	5.1								
			OBS	0200	1030	35240	271	1	00101		- , ,	1	1495	51								
			08S STD	0219 0250	1035 0930	35245 3517	271		00090	81 0	342		149 <u>5</u> 1492									
			085 085	0250 0271	0930 0855	35171 35092	272	2				1	1492	21								
			STD	0300	0835	3511	272 273		00081	73 0	386		1489 1489									
			08S 08S	0300 0315	0835 0777	35106 35050	273 2 7 3						1489									
			085	0355	0765	35114	274						1487 1487									
			STD OBS	0400	0610 0610	3493 34928	275 275		00064	67 0	459		1482									
			STD	0500	0508	3495	276	5 0	00051	12 0	517		1482 1479									
			08S 08S	0500 0525	0508 0554	34954	276	5				1	1479	95								
			085	0574	0513	35018	277						1481									
			ST0 08S	0600 0600	0516 0516	3504 35038	277 277		00047	09 0	566		1481 1481									
			085	0645	0483	35002	277	2				1	1481	0.1								
			STD OBS	0700 0700	0485 0485	3503 35034	277		0044	69 0	612		1482 1482									
			085	0757	0462	35020	277	6				1	1482	20								
			STD OBS	0800 0800	0451 0451	3501 35008	277		00043	52 0	656		1482 1482									
			STO	0900	0414	3497	277	7 0	00042	91 0	599	1	1482	2.3								
			OBS STD	0900 1000	0414 0401	34969 3497	277		0042	21 0	741		1482 1483									
			OBS	1000	0401	34970	277	8				1	1483	34								
			012 085	1100 1100	0411 0411	3500 35004	278 278		00041	8 0	784		1485 1485									
			STD OBS	1200 1200	0406 0406	3501	278	1 0	0042	05 0	825	1	1487	70								
			STD	1300	0391	35006 3499	278 278	1 0	0042	31 0	868		1487 1488									
			OBS STO	1300 1400	0391 0380	34989 3498	278 2 7 8	1	00424		910	1	1488	0								
			085	1400	0380	34980	278	1					l 489 l 489									
			STD	1500 1500	0375 03 7 5	3498 34980	278 278		00426	57 09	953	1	L490	7								
			200	1,000	0313	J-70U	218	4				1	1490	1								

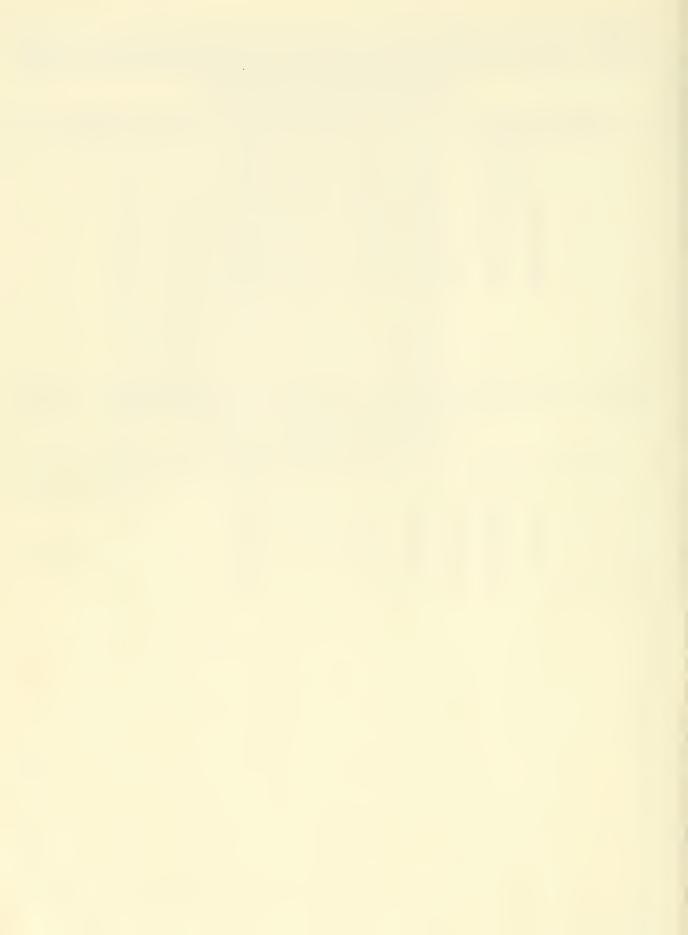
REFERENCE	SHIP	LATITUE		LONGITUDE	MARSDEN	STATION TI	WE	YEAR		ATOR'S	\Box	DEPTH	MAX.	085	WAVE ERVATIONS	WEA	CLOUD			ATION	
CODE NO.	CODE	-	1/10	1/10	10, 1,	MO DAY H		TEAN		STATION NUMBER		воттом	S'MPL'		HGT PER SE			T	N	UMBER	
318017	EV	4233	N (05014 W	150 20	07 27 1	182 1	967	IIP 10	036		2395	15	22	4 2	X1	03			0020	
, , ,	, ,			•		-	ואס	BAR	O- AIR TE	MP. C	vis.	NO.	SPE	CIAL							
					CODE	R TRANS. DIR.	OR FORGE	(mb		W ET BULB	CODE	OBS. DEPTHS	O8SER\	/A TIONS							
					DT	SD 21	522	20	3 239	228	7	27									
	MESSENGR	77.40	CARD				Т	1	SPECIFIC VOL	IMF &	Δ٥	sou	Qui		PO4=P	TOTAL-P	NO2-N	ио₃-и	\$104-\$1		5
	MESSENGR TIME OF HR 1/10	NO.	TYPE	OEPTH (m)	τ ℃	s */	SIGM	A-T	ANOMALY-X	10 ⁷ DY	△ D N. M. 10 ³	. AEFO		02 ml/l	μg = a1/1	yg = 01/1	μg - αl/l	μg - o1/l	µg - at/	pН	c
	77.0				1																T
	'		ST		2039	3306	232		004679	98 00	000		209								
	182		085	0000	2039	33060 33060	232						209								
			OBS ST	0005	1005 0805	33080	25		002262	20 00	035		882 807								
	003		085	0010	0805	33030	25						807								
			OBS	0015	1055	33600	25						908								
			STI	0020 0020	0945 0945	3453 34530	26		001358	32 0	053		881 881								
			OBS ST		0949	3458	26		00134	54 01	066		888								
			OBS	0035	0965	34600	26					14	892								
			OBS	0045	1105	35100	26		00110		000		950								
			ST		1161 1255	3525 3552	261		00119		092 121		973 012								
			ST OBS	0075	1255	35517	26		001100	, 0	121		012								
			085	0090	1165	35300	26	91				14	981								
			ST		1205	3543	26		00115	77 0	151		998								
			OBS ST		1205 1185	35430 3542	26		00113	47 0	179		998 995								
			085		1185	35420	26		00115	*, 0	* ()		995								
			ST	D 0150	1125	3533	27		00109	37 0	207		977								
			OBS		1125	35330	27				7.0		977								
			ST		1005 1005		27 27		00099	90 0	260		941 941								
			08S		0986		27		00102	98 0	310		941								
			085		0973	35120	27					14	937								
			ST		0773	3504	27		00077	37 0	356		869								
			OBS ST		0773 0585	35040 3495	27 27		00059	90 0	424		869								
			085		0585				00005	50 0	724		810								
			ST		0503	3499	27	69	00047	84 0	478	14	794								
			OBS		0503		27		00015				794								
			S1 085		0450 0450		27 27		00045	5/ 0	525		788 788								
			ST		0437		27		00044	33 0	570		799								
			OBS	0700	0437								799								
			ST		0435		27		00042	16 0	613		815								
			08S ST		0435 0449		27 27		00043	0.7 0	655		838								
			085		0449		27		000.5				838								
			ST	D 1000	0423		27		00042	11 0	698		844								
			OBS		0423		27 27		00041	94 0	740		844								
			S1 085		0423		27		00041	U - U	, 40		861								
			ST	D 1200	0415	3503	27	81	00041	80 0	782	14	874								
			OBS		0415						0.2		874								
			ST		0403		27 27		00041	57 0	824		886								
			OBS ST		0389		27		00042	14 0	865		896								
			OBS		0389							14	896								
			ST	D 1500	0375		27		00041	57 0	907		907								
			OBS	1500	0375	34995	27	83				14	907								

REFERENCE	SHIP			- Charles	MARSDEN	STATION T		ORIGIN	ATOR'S	DEPTH	MAX	. 1	WAVE	WEA				NODC	
CODE NO.	CODE	LATITU	1/10	LONGITUDE 1/10	SOUARE	MO DAY H	YEAR	CRUISE S	TATION	TO BOTTON	0.5	000	ERVATIONS	600	CODE	5		TATION	
31801	EV 4	+243		05014 W	150 20		203 196				3 MIL		HGT PER 5		ITPE AN				
1 - 2/00 -	,	1245	14 1	33014 M	WA		ZIND T	4.10.754		1298	13	25	4 2	XI	013		1	0021	
					COLOR	TRANS. DIP	SPEED MET	ER DRY		DEPTHS	OBSERV	CIAL							
					CODE	(m)	FORCE IMB	se) BULB	BULB	DEPTHS									
					TQ	SD 22	524 20	00 230	220 7	22									
		CAST NO.	CARD	DEPTH (m)	T 10	s */	SIGMA-T	SPECIFIC VOLU	> DYN. I	so.	מאט	02 ml/l	PO4=P	TOTAL-P	NO2-N	NO ₃ -N	SI 04-S		5
	HR 1/10		*1176					ANOMALY-XI	x 10	VEL	OCITY		μg = αt/l	νg - α1/1	ug = a1/l	μg = α1/1	µg - 01/	pН	C
		i							1										П
	203		STI OBS	0000	1947	3434	2442	003523	1 000		199								
	203		STO		1947 1125	34339 3440	2442 2628	001750			199								
			OBS	0010	1125	34399	2628	001790	5 002		943								
			STO		0985	3434	2648	001565	9 004		893								
	002		085	0020	0985	34335	2648				893								
			STE		0874	3428	2662	001437	3 005	8 14	853								
			OBS ST	0030	0874	34279	2662				853								
			085	0050	1005 1005	3490 34904	2689 2689	001184	3 008		913								
			STO		1095	3510	2688	001197	2 011		913								
			OBS	0075	1095	35100	2688	001177	2 011		952								
			STO	0100	1085	3515	2693	001152	7 014		953								
			OBS	0100	1085	35145	2693			14	953								
			STO	-	1016	3510	2702	001075	017		931								
			OBS STD	0125	1016 0958	35099 3508	2702	000000	010		931								
			OBS	0150	0958	35080	2710 2710	000999	+ 019		914 914								
			STD		0815	3496	2724	000877	024		867								
			OBS	0200	0815	34959	2724				867								
			STD		0626	3489	2745	000675	7 048		801								
			OBS STD	0250	0626 0540	34888 3493	2745	0005101			801								
			OBS	0300	0540	34930	2759 2759	0005431	0313		775 775								
			STD		0492	3493	2765	0004972	0365		772								
			085	0400	0492	34931	2765	000 1712	. 0-0.		772								
			STO		0455	3493	2769	0004657	0414		773								
			OBS	0500	0455	34930	2769				773								
			STD OBS	0600 0600	0440 0440	3493 34929	2771	0004595	0460		783								
			STD		0440	34929	2771 2772	0004570	0506		783 796								
			085	0700	0431	34932	2772	000777	0,00		796								
			STD	0800	0419	3494	2774	0004475	0551		808								
			085	0800	0419	34939	2774				808								
			SID		0411	3494	2775	0004439	0595	14	821								
			085	0900	0411	34944	2775				821								
			STD	1000	0406 0406	3495 34945	2776	0004466	0640		836								
			STD	1100	0408	34945	2776 2776	0004516	0699		836								
			OBS	1100	0403	34946	2776	0004010	0685		851								
			STD	1200	0399	3495	2777	0004536	0730										
			085	1200	0399	34949	2777			148									
			085	1298	0397	34950	2777			148									

EFERENC	SHIP				ĕ M	ARSOEN	STATION TH			ATOR'S	DEPT		:	WAVE SERVATIONS	WEA				1000	
TRY IO.	CODE	LATIT		LONGITUDE	7	QUARE	(GMT)	YEAR		TATION	BOTTO	0.5	00.	HGT PER SE	5000	TYPE AM	7		UMBER	
_		1.2	1/10	1/10	15			13 1967		038	084			3 2	×1				0022	
31/80	Lη EV	424	5 N	05014 W	113	0 20 0		100 1	IIP 10		1	1	23	12 4) XI	013	I	1	0022	
						COLOR		SPEED METE) <u> </u>	WET COL	JG 082	00000	CIAL VATIONS							
						COOE	(m) OIR.	FORCE (mbs		BULB	DEPT	451 00354	V A 110113							
						DT	SD 22	518 20	3 228	217 7	22									
	MESSEN	GR CAST	CARG	,			Ι		SPECIFIC VOLU	ME E A		OUND		PO4-P	TDTAL-P	NO2-N	NO3-N	5104-51		S
	IIME	₹ NO.	TYPE		1	T *C	5 %.	SIGMA-T	ANOMALY-X		w.	ELOCITY	O 2 ml/l	pg = 01/1	µg - 01/1	µg − ot/l	yg - a1/l	yg - a1/1	pН	c
	HR 1/	10	-		+		-				_			-		-				+
	1	1	ST	0000		1918	3264	2320	004664	8 000	o 1	5171		1	I	1	ı	ŀ		11
	2	13	085			1918	32642	2320	004004	0 000		5171								
	_	1)	OBS			0919	32700	2531				4845								
			ST			1246	3402	2576	002246	5 003	5 1	4980								
	0	02	OBS			1246	3499P	2651P												
			OBS			1307	34779	2623				5011								
			ST			1205	3454	2624	001791	4 005		4974								
			085 ST			1205 1005	34540 3448	2624 2656	001493	2 007		4904								
			085			1005	34480	2656	0014)	2 001		4904								
			0BS			0904	34530	2676				4869								
			ST			0986	3484	2687	001201	3 009	8 1	4905								
			OBS		1	0986	34839	2687			1	4905								
			085	0065		1099	35100	2687				4951								
			S T			1085	3508	2688	001195	4 012		4948								
			OBS			1085	35079	2688				4948								
			085			1150 1125	35271 3524	2691 2693	001153	5 015		4916								
			S1 089	-		1125	35239	2693	00117	,, ,,,		4968								
			SI			1039	3507	2696	001139	1 018		4939								
			089			1039	35070	2696			-	4939								
			ST)	0871	3497	2716	000945	4 021	2	4880								
			QB5	0150	}	0871	34968	2716				4880								
			51			0763	3497	2732	000797	2 025		4847								
			089			0763	34965	2732				4847								
			OBS			0596 0634	34885 35000	2749 2753				L4783 L4805								
			0B9			0612	3500	2755	000578	31 029		4797								
			OB5	-		0598	34990	2757	300310	, , , , ,	_	14792								
			0B3	, .		0609	35007	2757				4799								
			51			0570	3498	2759	000544	6 031	8	4788								
			085	0300)	0570	34978	2759				4788								
				TD 0400		0498	3496	2767	000479	8 036		4775								
			089			0498	34964	2767				4775								
			089	5 0485		0466	34939	2769				14775								

EFER	ENCE	SHIP					MAR	SDEN		ION T			0	RIGINA	TOR'S		DEPTH	MAX.		WAVE	-	W EA -	CLOU			
TRY	10.	3000	LA TITE	- 1	LONGI	18 5	SOL	IARE		GMTI		YEAR	CRUISE		ATION		10	DEPTH	08	SERVA TIO	NS	THER	CODE		S	NOOC
-				1/10		1/10	10°	1.	MO	H YAC	8,1/10		NO.	NI	JMBER		MOTTON	S'MPL'	S DIR.	HGT PER	\$ ē A	CODE	TYPE A	νT	N	UMBER
3 1	8017	1 Ev	425	5 N	0501	4 W	150	20	07	27	228 1	967	IIP	100	39		256	02	23	3 2		X1	6 6	,		0023
								WA	TER	V	VIND	BARC	A	IR TEM	P. °C	Τ̈́T	NO.		-	' ' '		,		'	ı	0025
								COLOR		DIR.	SPEED	METE	R D		WET	VIS.	OBS.		CIAL							
								CODE	(m)		FORCE	(mbs) BU	LB	BULB		SHT93C									
										23	516	19	6 2	17	206	7	06									
		MESSENGA	CAST	CAR		DEPTH (m)	,	°c		٠/			SPECIFIC	VOLUM	E 2	2 0	501	ОИГ		PO4-		0711				
		HR 1/10	T NO.	TYP	PE (Jerin mij	'		,	···	SIGM	A-1	ANOMA	LY-X10	O AV	1. M.		CITY	O 2 mi/l	yg - ot		vg + a1/1	NO2=N ug + o1/3			
							_					_			1		-	-		+	+			7, 0		
			1		TD	0000	1	355	32	20	2/2	1	003	7207	1		١,,,	!				- 1			1	
		22	R	OB.		0000		355		277	242 242		003	1302	00	00		993								
			_		TD	0010		056	32		250		0028	2222	0.0	33		993 896								
					TD	0020		772	33		257		0022			59		796								
		22	8	OB.		0025		636		110	260		0021		00	23		744								
					TO	0030		437	33		262		001	1447	0.0	79		664								
				S	TΩ	0050		016	33.		266		0013					484								
		22	В	OB;	S	0050	0	016	33.	228	266		00-		0 -			484								
						0075	0	331	33	79	269	2	0011	503	01	41		635								
		221	3	085		0075	0	331	33	794	269	2					14	635								
						0100		455	33		269	5	0011	251	01	69	14	694								
		228	OB:		0100		455		992	269	5					14	694									
						0125		540	34.		270	0	0010	813	01	97	14	736								
						0150		585	34:		270	9	0010	1036	02	23	14	761								
		228	3	OB5	S T	0155	0	589	34:	393	271	1					14	764								

REFERENCE CTAY 10. COOE NO. 3 1 8 0 1 7	SHIP CODE EV	4305	1/10	1/10 1/10 05014 W		0 30 w	MO 07	28	HR.1/10	1967 BAR MET (mb	7]	NO. N	TATION IUMBEI	VIS.	DEPTH TO BOTTON OO 73 NO. OBS. DEPTHS	O:	H 085	WAVE ERVATIONS HGT PER SE	WEA- THER CODE	CLOUD CODES			NODC ITATION NUMBER	
i	MESSENGR TIME O	CAST NO.	CARD TYPE	DEPTH (n	1	т °С		٠/	1	SMA-T	SPI	PECIFIC VOLUM	M.E	E △ D YN, M X 10 ³	SOI	UND DCITY	02 ml/l	PO4-P yg = of/I	TOTAL-F pg - of/I		NO3-N h8 - 01/1	\$1 04-\$1 99 - 01/	pH	500
	005 005 005 005		OBS STO OBS STO OBS STO OBS OBS	0000 0010 0010 0020 0025 0030		1818 1818 0925 0925 0316 0109 0092 0048 0048	3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 3 3 3	24 241 431 84 981 99 01 013	2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2	314 314 509 509 517 544 546 550 551	0	0047396 002881 0018536 0015806	3 C 8 O	0000 038 062 079	15 14 14 14 14 14	137 137 845 845 607 519 512 496 496								71



532-AA-

Woods 1'0's asserted to this fill ton ATLAS . ChiZeTTEEN COLLECTION STATES CONTO